Graphical Control Panel

GCP1

Customer‘s Manual

Software Release V 1.6.x

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BROADCAST SOLUTIONS

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Sous réserve de modification au cours de l'évolution technique.

Revision Report

Graphical Control Panel GCP1 **Customer's Manual**

Documentation Order Number FU 0104, 000 126 630 400

Before reading the entire manual, please check for any supplements at the end of the manual.

Item	Rev	Date	Ser No	Pages affected	Contents	Remarks
1	0	2.2001	101	All	Customer's Manual	First Issue V 1.1.0
2	1	5.2001	101	All	Customer's Manual	First Issue V 1.1.0
3	2	7.2001	101	All	Customer's Manual	Softw. Release V 1.5.5
4	3	10.2001	101	All	Customer's Manual	Softw. Release V 1.6.9

SAFETY INSTRUCTIONS

The **Graphical Control Panel GCP1** is designed in conformity with the EN60950 / VDE0805 safety regulations (protection class 1). In order to maintain this condition and to ensure safe operation, the safety requirements & instructions below and those in the individual sections of the manual have to be observed:

c

E184475

This Graphical Control Panel GCP1 (single-phase mains 100 to 240V AC or two-phase mains 180 to 240V AC) is designed according to regulations of the Underwriters Laboratories Inc. ® Northbrook, Illinois US, certificated in July 1997 and registered as file no. E184475.
The GCP1 is constructed in conformity with the American and Canadian UL standard and is marked with an UL sign on the bottom side.

In the USA the GCP1 is licensed to operate at 100 to 240V AC Power according to UL 1419.

In Canada the GCP1 is licensed to operate at 100 to 240V AC Power according to CSA 22.2 No. 950.

Conform with the following European directives and CE marked:

Safety:	Low voltage directive 73/23/EEC, EN 60950 / 1997	
EMC / EMI	EMC directive 89/336/EEC	
	Interference emission	EN 55103-1 / 1996 EN 55022 Class A
	Interference immunity	EN 55103-2 / 1996

Electromagnetic Environment

The GCP1 is designed for use controlled Electromagnetic Environment E4 of EN 55103–1.

N4067

EMC	AS/NZS 3548

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC 47 Part 15 Class A

FCC Rules
47 Part 15 Sec 15.105

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Ventilation

When mounting the unit, care should be taken to allow for adequate air ventilation. Holes in the case serve for air circulation. Do not cover the holes to avoid excessive heating of the unit. For detailed information refer to section *Technical Data* in this manual.

- The admissible ambient temperature range (operating temperature) is within +5°C and +35°C (41°F to 95°F).
- Humidity (air humidity and liquids) impair operation!
  Relative humidity must be < 80%.

Connection cables

The EMV regulations are only applicable when correctly shielded cables are used for installation of the equipment. This applies to video cables as well as control cables. Corresponding cables can be obtained from Thomson.
For power supply connection, only use the supplied connection cable or a checked cable of the same type (three wire cord with earthed protective conductor).
Run all connection cables in covered cable ducts (risk of stumbling).

Installation

The unit is designed for operation

a) with single-phase mains (100 to 240V AC) with grounded (neutral) conductor (L1, N, PE) or

b) with two-phase mains (180 to 240V AC) without neutral (L1, L2, PE)

The power cord must be connected to an earthed (PE) wall outlet.

Check functioning of the protective conductors. It must not be live. Any discontinuity in the protective conductor may lead to a situation in which operational safety of the unit cannot longer be guaranteed. When installing the lines, it is necessary to observe the national standards.
Protect cables (specially the power supply cord) so they are not likely to be damaged.

Earthing

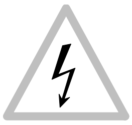
The unit is earthed by the PE-wire of the three-wire power cord.
It is not allowed to operate the unit without this earth connection or to isolate the PE-wire.
The housing of the GCP1 panel is connected to protective earth (PE).
The panel has a PE terminal on rear. This PE terminal can be connected to a central earth system to prevent or eliminate EMC interferences.

During Operation

Operate the unit in the closed condition only. Opening the device is permitted only by qualified service personnel. There are no parts inside the unit to be adjusted by the user or parts to be exchanged.
Make sure that no parts protrude into the air conditioning holes. This might lead to contact with dangerous voltages or to damages of sensitive circuit parts.

If, for example, due to a failure, safe operation of the unit is no longer ensured, put the unit out of operation and secure it against further use.

Do not insert or remove plug-in cards during operation.



High Voltage

Caution!

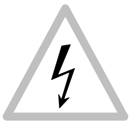
Do not remove any cover. Risk of electrical shock. High current level.
No user servicable parts inside. Refer all servicing to qualified service personnel.

Access to the Inside

Opening the covers or removing parts with tools may give access to live parts. In such cases, the GCP1 has to be disconnected from the mains.
If, for example due to a failure, safe operation of the GCP1 is no longer ensured, take the panel out of operation and secure it against further use.

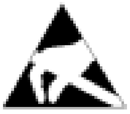
If, however, working on the opened machine is inevitable, this has only to be done by an expert who is familiar with the dangers involved.

Service



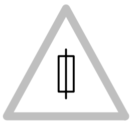
All service works must be carried out by qualified service personnel only!

Before working on the power supply circuit (power clips, wires, filters, switches, fuses etc.) do unplug the power cord. Even if the mains switch is ”OFF”, the parts of the unit are still alive!



Attention!
Electrostatic sensitive devices on the p.c. boards. Observe precautions for handling.

Fuses



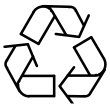
Double-pole or neutral fusing. After acting of the protective device, parts of the equipment may remain under voltage. The GCP1 is protected by two primary-side fuses located inside the *AC Power in* connector. The power supply will be protected by an internal fuse. Service only by qualified service personnel.

Caution!
To reduce the risk of fire replace only with the same type and rating of fuse.
Never use a mended fuse! Do not short-circuit the fuse holder!

Batteries

The GCP1 contains a lithium battery, which has to be exchanged every five years. The battery should be replaced by Thomson service personnel only!

Caution!
Danger of explosion if battery is incorrectly replaced (interchanged poles). Replace only with the same or equivalent type recommended by the manufacturer. Dispose used batteries according to the manufacturers instructions.



Protect the environment!
Dead batteries do not belong in the garbage. Hand the used batteries over to a local disposal place!

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1. INTRODUCTION

The Idea

- Replace the currently used FCP (Functional Control Panel) and provide equal functionality
- Improve user friendliness by improving speed and ease of operation.
- Use most current technology
- Enable easy updating of desired panel options

The Applications

- In high end post production to be used as a side panel in addition to controllers and pre–programmers from e.g. **Pandora** or **daVinci**
- In long form transfer applications to be used either in addition to (if frequently used) or instead of a controller / pre–programmer (if occasionally used)
- In one light transfer applications as a more economical alternative to a controller / pre–programmer and a more user friendly alternative to the FCP.
- For a junior colorist to easily acquire an understanding of how to use a telecine
- For a senior colorist to easily discover settings that are not supported by controller / pre–programmer
- For set-ups not supported by **Pandora** and **daVinci**

The Implementation

- TFT color display is used in conjunction with a touch screen
- 6 digital potentiometers are software assigned to the various control functions
- 10 hard keys are software assigned within various menus
- 8 hard keys for non–assignable functions
- Integral power supply unit
- No ventilating necessary
- The same footprint as the FCP
- 19 inch rack mountable
- Optional desk and rack mountable frame with swivelling mechanism

1.1 OVERVIEW OF TYPES AND ORDER NUMBERS

Type	**Description**	**Order number**
GCP1-100	Graphical Control Panel set cpl.	0 128 651 010
GCP-800	Desk mounting set with swivel frame	0 128 651 018
GCP-900	19” rack mounting kit with swivel frame	0 128 651 019
GCP1-100	Graphical Control Panel exchange unit	0 128 651 090
GCP1-200	GCP upgrade kit GCP1-100 incl. 19” rack mount kit, without swivel frame	0 128 652 010

FH 6517	**Standard Accessories,** including:	**0 128 651 700**
	Stylus / touch pen (3 pcs), Stylus holder (1 pc)	1 128 651 046 1 128 651 047
	8MB USB Memory Key (1 pc)	3 114 060 017
	USB extension cable, 1.8 m	5 136 391 005
	19“ rack mount angles (2 pcs)	1 128 651 012
	Fastening screws (4 pcs)	3 000 965 007
	Mains cable (Euro / 2.5 m)	5 136 702 028
	Mains cable (US / 2.5 m)	5 136 702 029
	RJ45 patch cable (20m)	5 136 391 002
	3mm hex socket wrench (1 pc)	9 000 505 143
	Fuse T1A / 250 V (10 pcs)	3 117 301 058

1.2 SYSTEM OVERVIEW

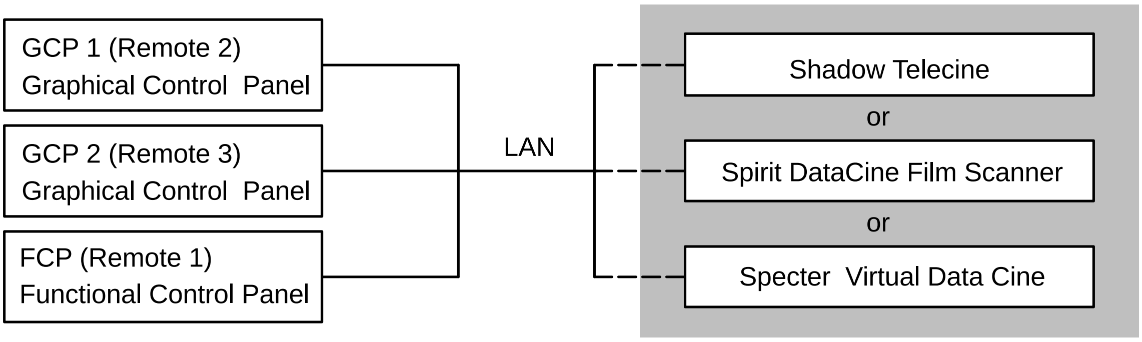


Fig. 1: Overview of the system

The **GCP** consists of a LCD display touch screen and several buttons and knobs placed around the screen. It is controlled by internal PC.

The PC is equipped with a hard disk drive to allow permanent storage of DataCine/ Telecine settings, user preferences and other information. The operating system and the application program for the PC are also stored on the hard disk.

2. TECHNICAL DATA

2.1 GENERAL

Dimensions

Width: 220 mm	Length: 446 mm	Depth: 81.55 mm
Width: 8.66 inch (5 RU)	Length: 17.56 inch	Depth: 3.21 inch

Desk cut-out:	423 x 214 mm
Desk cut-out:	16.65 x 8.43 inch
Desk cut-out with swivel frame:	449 x 238 mm
Desk cut-out with swivel frame:	17.68 x 9.37 inch

Weight 4 kg / 8.82 lbs

Voltage supply

Wide AC range switch–mode power supply module
AC IN voltage: 100 – 240V AC, 50 / 60Hz
100 to 240V AC single-phase mains with grounded (neutral) conductor (L1, N, PE) or
two-phase mains (180 to 240V AC) without neutral (L1, L2, PE)

Fuse T1 A / 250 V

Power consumption: approx. 30 W

Housing potential The housing of the GCP1 panel is connected to protective earth (PE)

Environmental requirements

The admissible ambient temperature range (operating temperature) is between +5°C and +35°C (41°F to 86°F).

High humidity (air humidity and liquids) will impair operation!
Relative humidity must be < 80%.

The GCP1 is in conformance with the following European directives and is CE labled:

Safety:	Low voltage directive 73/23/EEC, EN 60950 / 1997	
EMC / EMI	EMC directive 89/336/EEC	
	Interference emission	EN 55103-1 / 1996 EN 55022 Class A
	Interference immunity	EN 55103-2 / 1996

Electromagnetic Environment

The GCP1 has to be used in controlled Electromagnetic Environment E4 of EN 55103 only.

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

N4067 EMC AS/NZS 3548

Interface

LAN J5 connector for direct connection to the Telecine.
USB J4 (for future use)
3x Serial port RS-485 (for future use), 9pin D-sub, female.
Ports re-configurable for RS-232.
Communication is asynchronous at 38.4 kbaud, 1 start, 8 data, no parity, 1 stop bit.

Standard Accessories

Accessory pack with mains cables (Euro / US), RJ45 patch cable, spare fuses, spare stylus (touch pen) with holder, parts for 19” rack mounting and tool.

Options

19” rack mounting set with swivel frame	order no. 0 128 651 018
Desk mounting set with swivel frame	order no. 0 128 651 019
Spare stylus (touch pen)	order no. 1 128 651 046
Spare stylus holder	order no. 1 128 651 047

2.2 TOUCH SCREEN

Liquid Crystal TFT–Display
Type LP104V2–W
General Display Characteristics
Active display area 10,4” diagonal
Outsize dimensions 246,5 x 179,4 x 8 mm
Pixel format 640 horiz. by 480 vert. Pixels
RGB stripe arrangement
Color depth 6 bit, 262144 colors
Display operating mode transmissive mode, normally white
Backlight–Inverter integrated on FY 6511 board

Mechanical

Input Method	Finger or stylus
Touch Activation Force	Will vary with stylus of finger input, nominally 4 ounces (102 grams)Switch

Travel nominally 0.0035”
Surface Hardness Passes 4H scratch hardness in accordance with ASTM 33–92A
UL NWGQ2.E155649

Do not use pointed, sharp edged or metallic implements as a stylus, they may damage the sensitive touch screen!
Use only the Thomson stylus, order no. 1 128 651 046.

2.3 MICRO CONTROLLER IPC/104 DATA

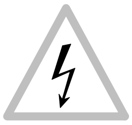
Jumptec–Typ: MOPSIcd6
Complete functionality of a pentium – PC
Processor: Intel Pentium with 166 MHz CPU–Clockspeed
Chipset: ALI M1543/M1531 PCI Chipset
Serial ports: COM1 COM2
Ethernet: 100/10BaseT – Port
USB: 1 Downstreamport
EIDE–PCI–harddisk–interface
Memory: 64 MB SDRAM–SODIMM–Module
TFT–Display adapter
Harddisk: 2.5”, 6 Gbyte IBM Travel

2.4 POWER SUPPLY UNIT (INTERN)

Lambda – Typ ZWS 30–5
Input voltage range: 100 – 240V AC (50/60Hz)
Output voltage: 5V (6.0A max.)
Power consumption: 22 W
Fuse : 3.15 A / 250 V

3. INSTALLATION AND STARTUP

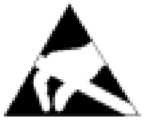
3.1 SAFETY INSTRUCTIONS



Caution!

These instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any installation other than that contained in the Operating Instructions unless you are qualified to do so.
Refer all servicing to qualified service personnel.

The housing of the GCP1 panel is connected to protective earth (PE).



Attention!

Electrostatic sensitive devices on the p. c. boards. Observe the following precaution for handling:

- Handling or mounting the GCP1 unit calls for special attention to personal safety. Personnel should be connected to ground potential via a wristlet (e.g. 3M Wristlet Serial 2200).
- Do not touch p. c. boards during mounting.
- Repair p. c. boards only at static-safe work stations.
- Use antistatical protective bags when carrying p.c. boards.

3.2 DESK MOUNTING

3.2.1 FIXED DESK MOUNTING

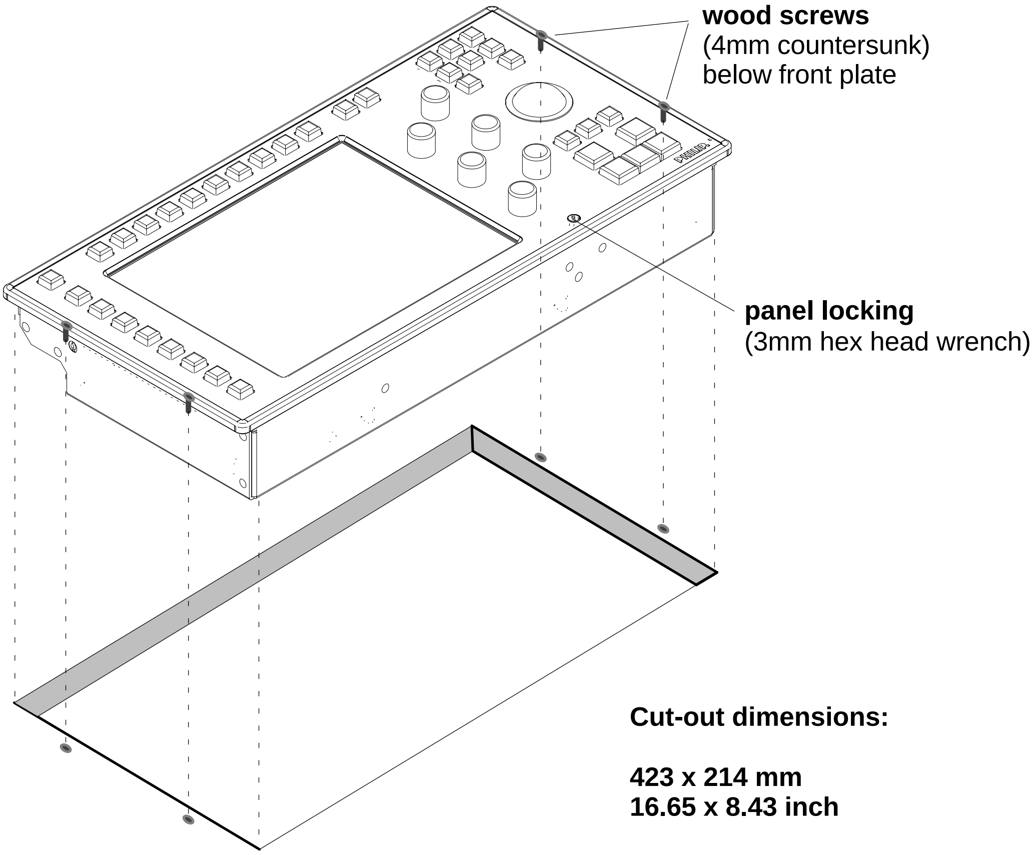


Fig. 2: Cut-out dimensions for the **fixed desk mounted GCP1**

- Before being mounted into a desk, the GCP1 has to be opened. For this purpose loosen the locking screw of the panel with a 3 mm hex head wrench. This tool is part of the accessory set.
- Cut-out the opening in the desk.
  Cut-out dimensions: 423 x 214 mm / 16.65 x 8.43 inch
- Set the opened GCP1 panel into the desk cut-out. Fasten the panel with four 4mm countersunk wood screws. For this purpose, the frame is provided with four screw holes. The length of the screw depends on the thickness of the desk plate. The wood screws will not be delivered.
  Note:
  Before fastening the panel make sure that the ventilation holes of the panel are not covered by the thickness of the desk plate. The ventilation of the panel must not be impeded in order to ensure sufficient cooling of the device and to guarantee an interference-free operation of the GCP1. Should the thickness of the plate be more than 10 mm, the underside of the desk plate has to be bevelled in the area of the ventilation holes (see Fig.4).
- Connect the cables into the corresponding plugs of the panel.
- The PE terminal on rear of the GCP1 panel (see Fig. 9) can be connected to a central earth system to prevent or eliminate EMC interferences.

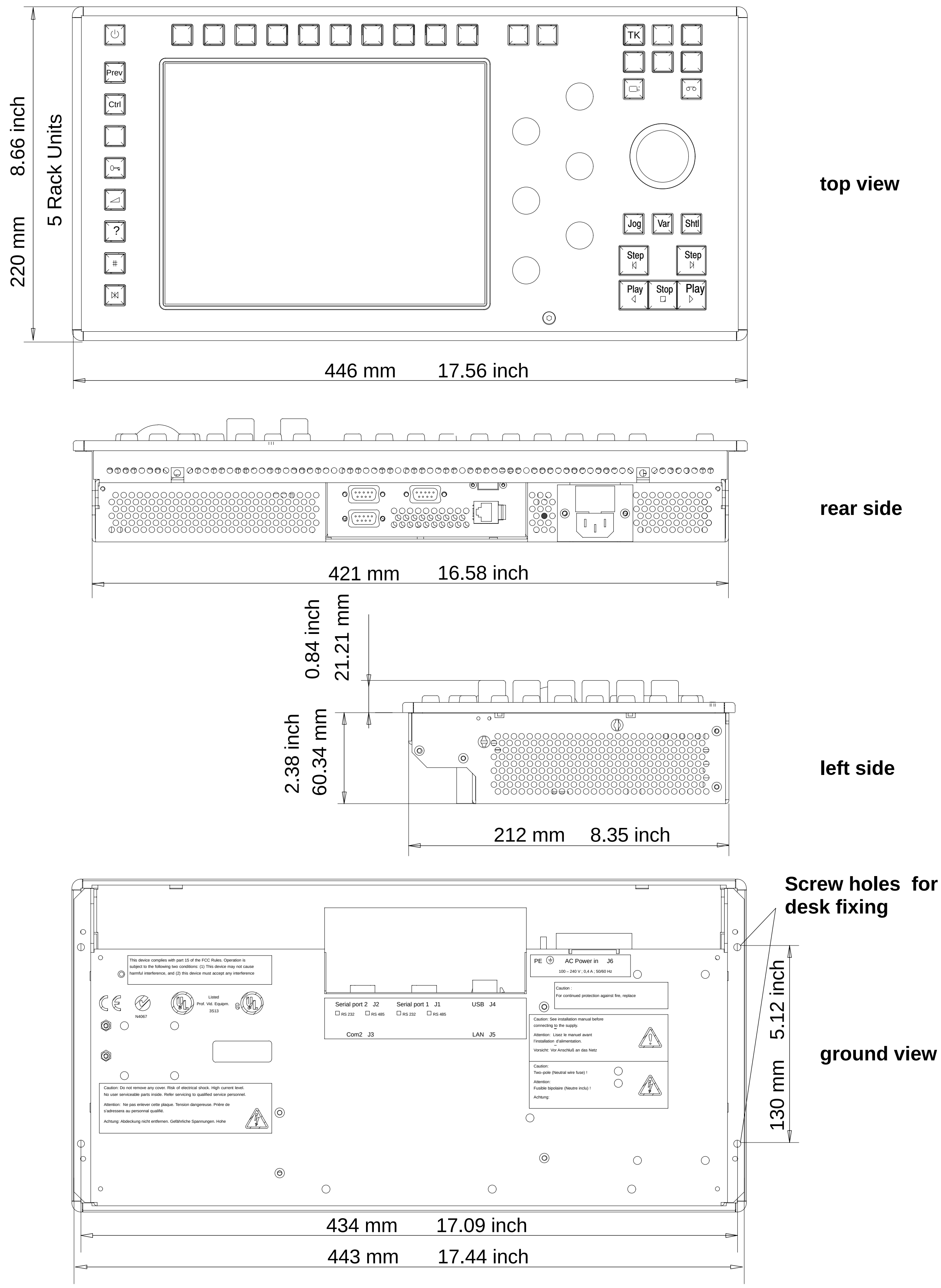


Fig. 3: Mechanical dimensions of the **GCP1**

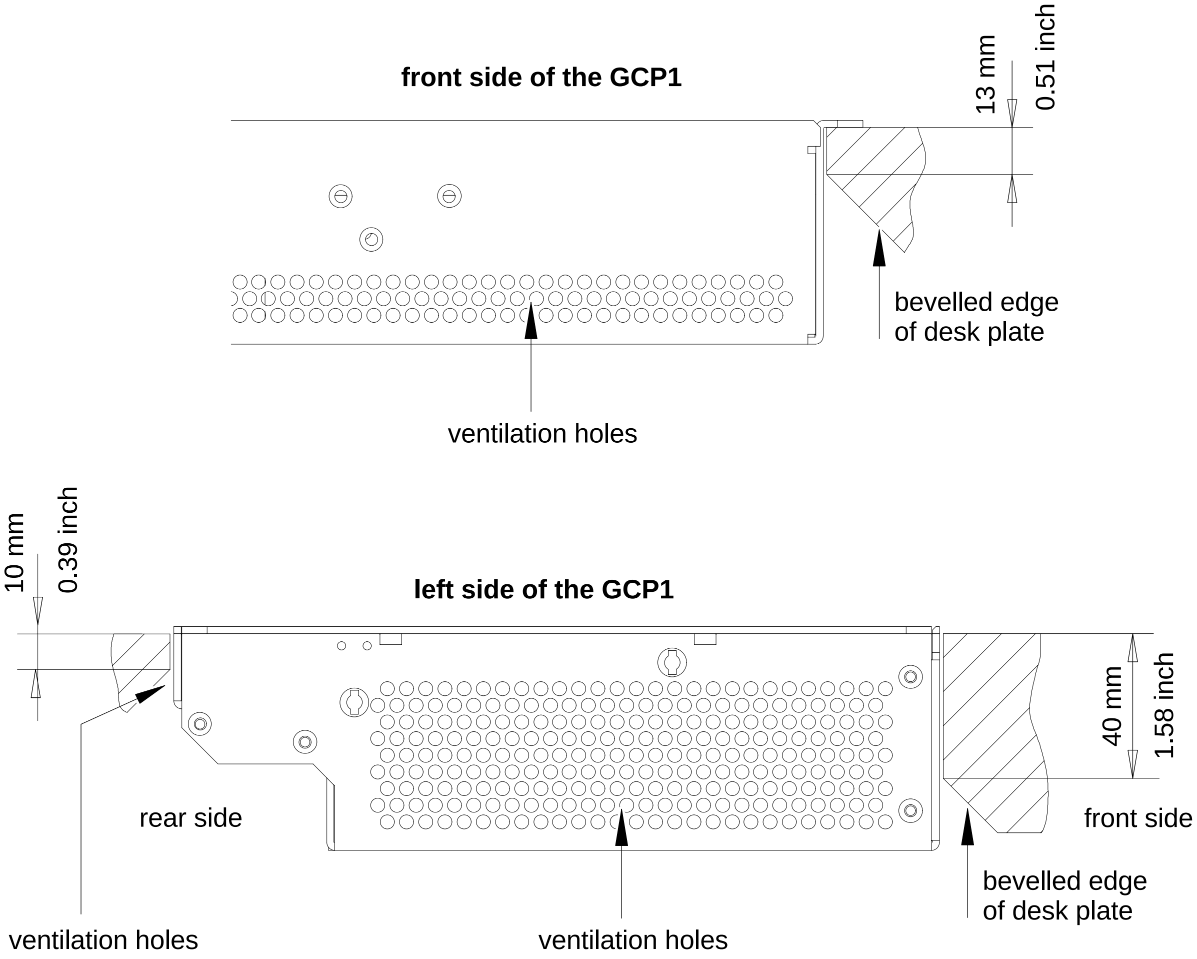


Fig. 4: Ventilation holes of the **GCP1**

3.2.2 DESK MOUNTING WITH SWIVEL FRAME

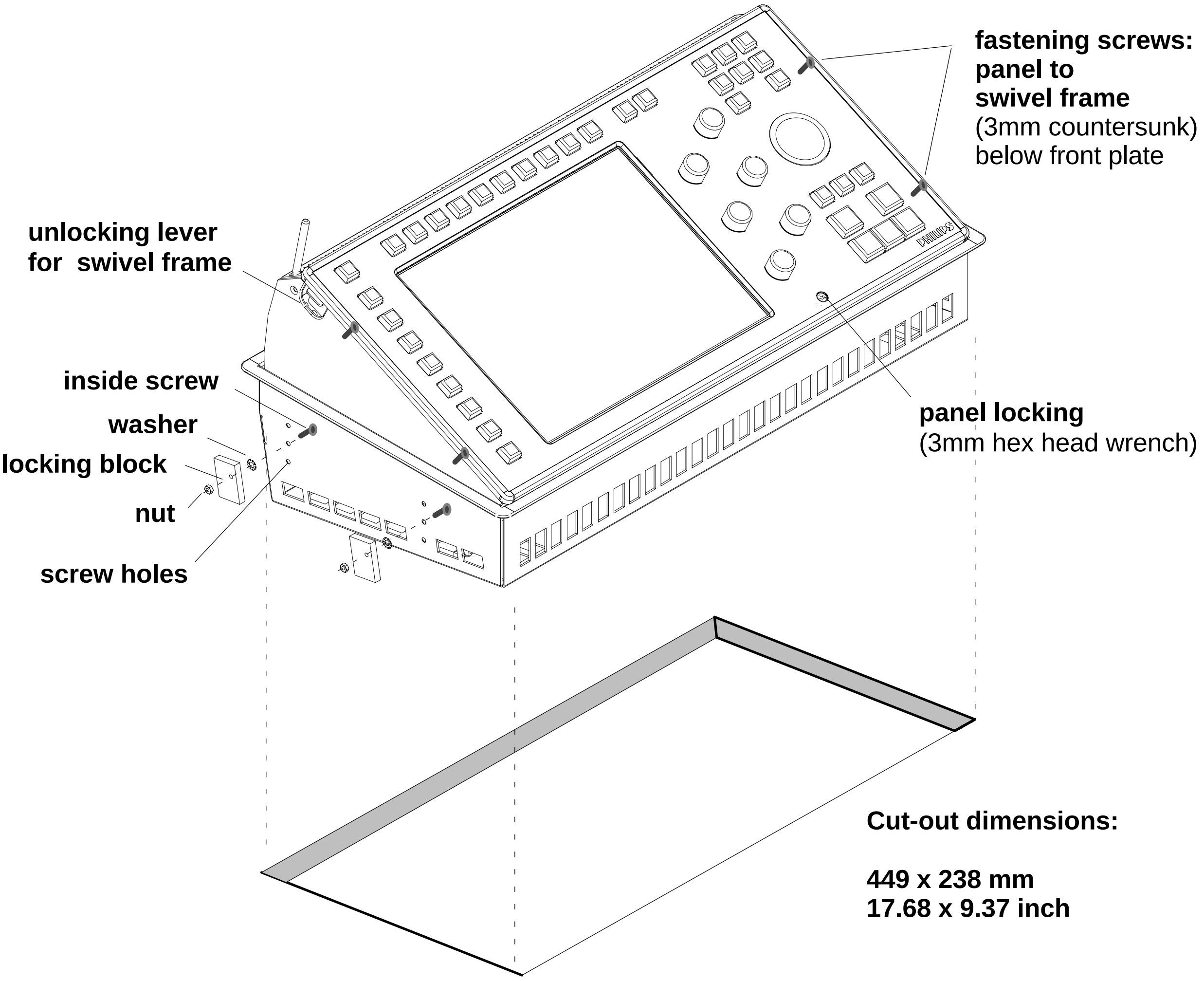


Fig. 5: Cut-out dimensions for the **GCP1 with desk mounting swivel frame**

- The swivel frame with mounted desk locking blocks and the GCP1 panel will be delivered separately.
- Cut-out the opening in the desk.
  Cut-out dimensions: 449 x 238 mm / 17.68 x 9.37 inch
- Swing out the swivel frame by pressing the unlocking levers and disassemble the four desk locking blocks.
- Set the swivel frame into the desk opening and fasten the four desk locking blocks below the desk plate in one of the three screw holes, depending on the thickness of the desk plate.

  Note:
  Before fastening the swivel frame make sure that the ventilation holes of the housing are not covered by the thickness of the desk plate. The ventilation of the housing must not be impeded in order to ensure sufficient cooling of the device and to guarantee an interference-free operation of the GCP1.
  Should the thickness of the plate be more than 35 mm, the underside of the desk plate has to be bevelled in the area of the ventilation holes.

- Insert the GCP1 panel into the swung on swivel frame and open the panel by loosen the locking screw of the panel.
- Fasten the panel to the swivel frame with the four 3 mm countersunk cross head screws; close and lock the panel.
- Swing out the GCP1 panel (with swivel frame), lead the cables from the cable feed-through via a loop to the corresponding plugs of the panel and fasten them with the cable traction relief (see Fig. 6).
  The cable loop should have a diameter of approx. 6 inch / 150 mm.
- The earth wire from the PE terminal of the swivel frame (see Fig. 6) has to be connected to the PE terminal on rear of the GCP1 panel (see Fig. 9).
  This PE terminal can be connected to a central earth system to prevent or eliminate EMC interferences.

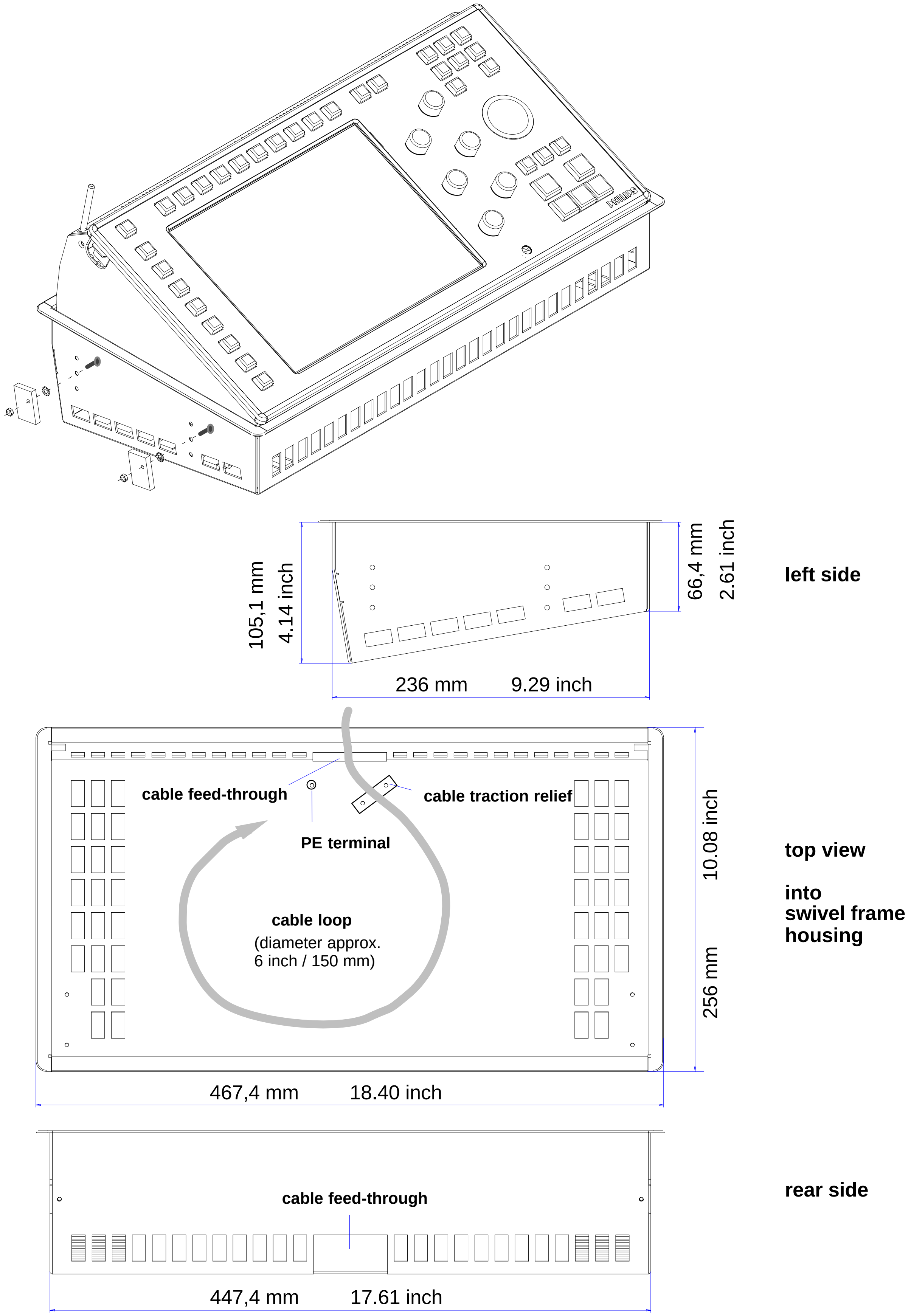


Fig. 6: Mechanical dimensions of **GCP1 with desk mounting swivel frame**

3.3 RACK MOUNTING

3.3.1 FIXED RACK MOUNTING

- For a fixed rack mounting of the GCP1 panel into a 19” cabinet a height of **5 RU’s (222 mm / 8.75 inch)** is required.
- Unlock the GCP1 panel with the 3 mm hex head wrench and open it.
- Fasten the rack mounting brackets to the frame of the GCP1. (The brackets and panel fastening screws are part of the accessory set).

Note: ***Before being mounted into the rack, the GCP1 has to be closed and locked with the 3 mm hex head wrench.***

- Mount the prepared GCP1 panel into the rack. The rack mount screws will not be delivered, because they are depending on the different rack types.
- Connect the cables to the corresponding plugs of the panel.
- The PE terminal on rear of the GCP1 panel (see Fig. 9) can be connected to a central earth system to prevent or eliminate EMC interferences.

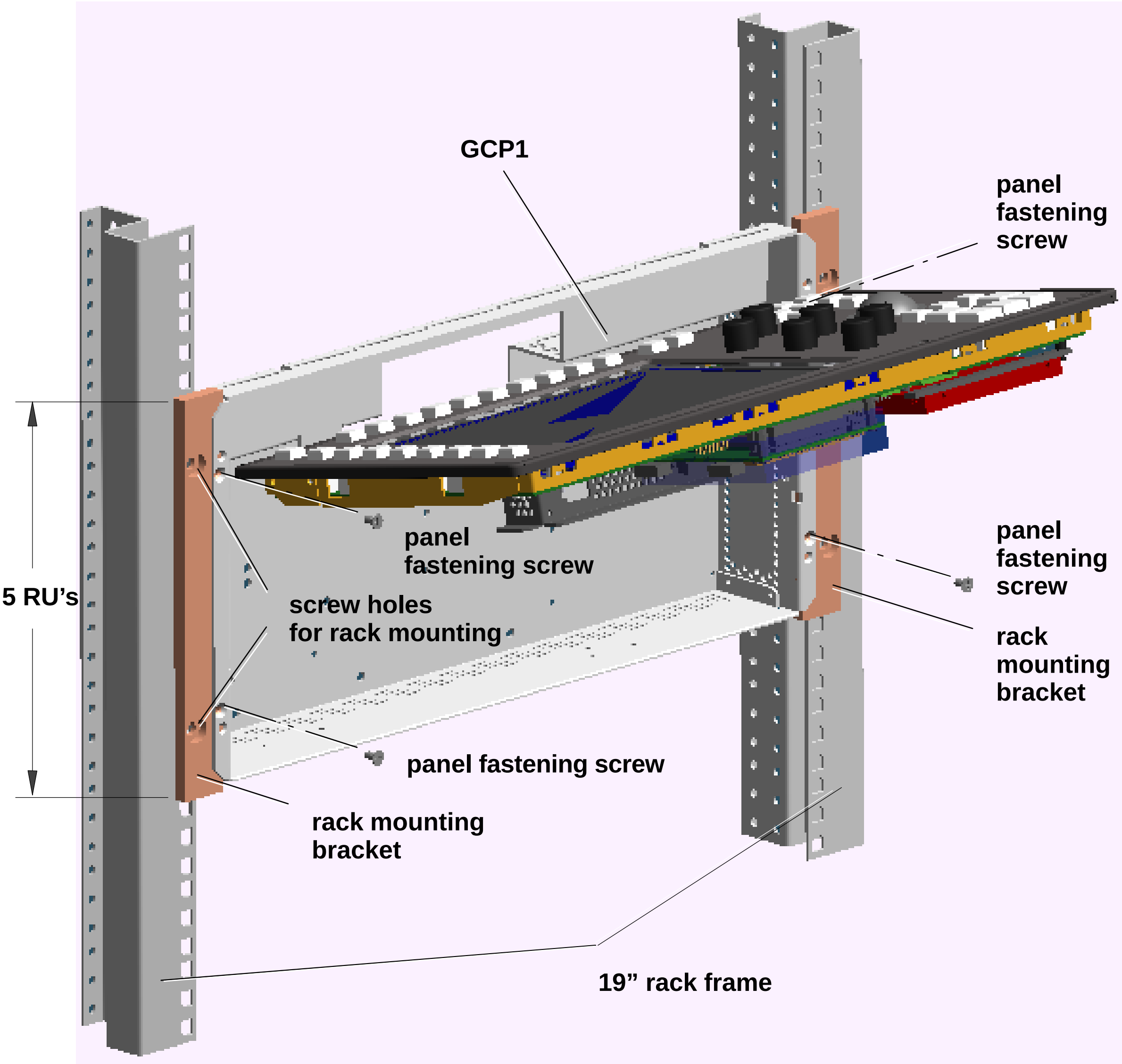


Fig. 7: **Fixed** rack mounting of the GCP1

3.3.2 RACK MOUNTING WITH SWIVEL FRAME

- For a 19” rack mounting with swivel frame the GCP1 panel needs a built-in height of **3 RU’s (134 mm / 5.24 inch)** and a height of **5 RU’s (222 mm / 8.75 inch)** in swung-down (vertical) position.
- The components of the swivel frame will be delivered unmounted and separated from the GCP1 panel.
- The swivel frame has to be mounted into the rack first; then the GCP1 panel can be installed.
- **Rack mounting of the swivel frame:**
  Mount the left and right side traverse (assembled with telescope rail & swivel mechanism) into the rack.
  The rack mount screws will not be delivered, because they are depending on the different rack types.
  Mount the rear traverse to the left and right side traverse with the four 3 mm countersunk cross head screws from above.
  Mount the front traverse to the left and right telescope rail with the four 3 mm countersunk cross head screws from below.
  Pull out the left and right telescope rail by pressing the unlocking levers.
  Mount the front plate of the swivel frame with four 3 mm countersunk cross head screws at the left and right side.
- **Installation of GCP1 panel:**
  Pull out the swivel frame and position it horizontal by pressing the unlocking levers.
  Insert the GCP1 panel into the swivel frame.
  Loosen the panel locking screw with the 3 mm hex head wrench and open it.
  Fasten the panel to the swivel frame with the four 3 mm countersunk cross head screws.
- Lead the cables from the rear side of the rack through the cable holders via a first loop (long enough to plug in and out the GCP) to the swivel frame.
  Lead the cables within the swivel frame via a second loop (diameter approx. 6 inch / 150 mm) to the corresponding plugs of the panel and fasten them with the cable traction relief (see Fig. 6).
- The earth wire from the PE terminal of the swivel frame (see Fig. 6) has to be connected to the PE terminal on rear of the GCP1 panel (see Fig. 9).
  This PE terminal can be connected to a central earth system to prevent or eliminate EMC interferences.

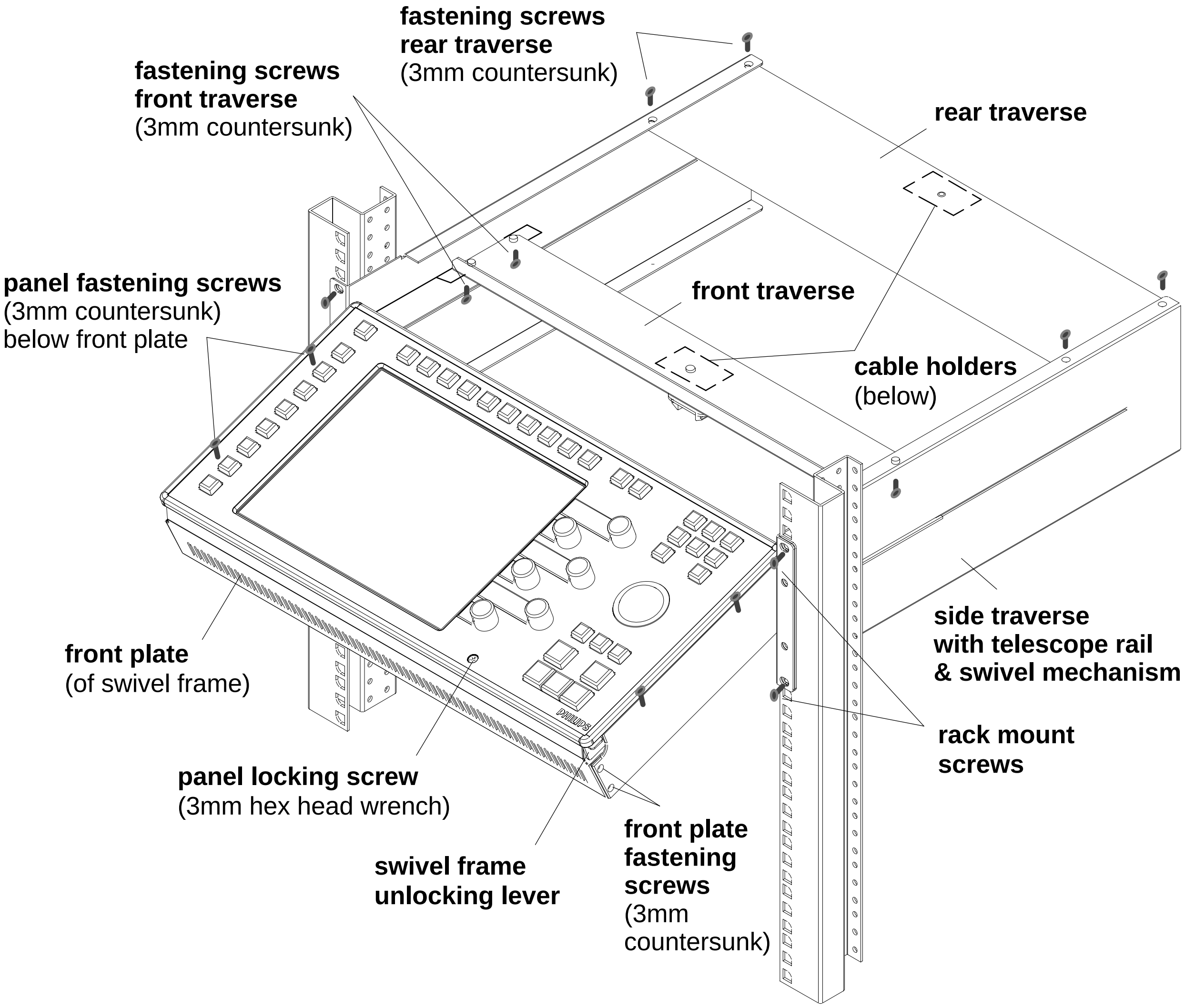


Fig. 8: Rack mounting of the **GCP1 with swivel frame**

3.4 CONNECTING TO THE DATACINE / TELECINE

Attention: ***The EMC regulations require the use of properly shielded cables in the installation of the device or the system. Suitable cables can be ordered from Thomson.***

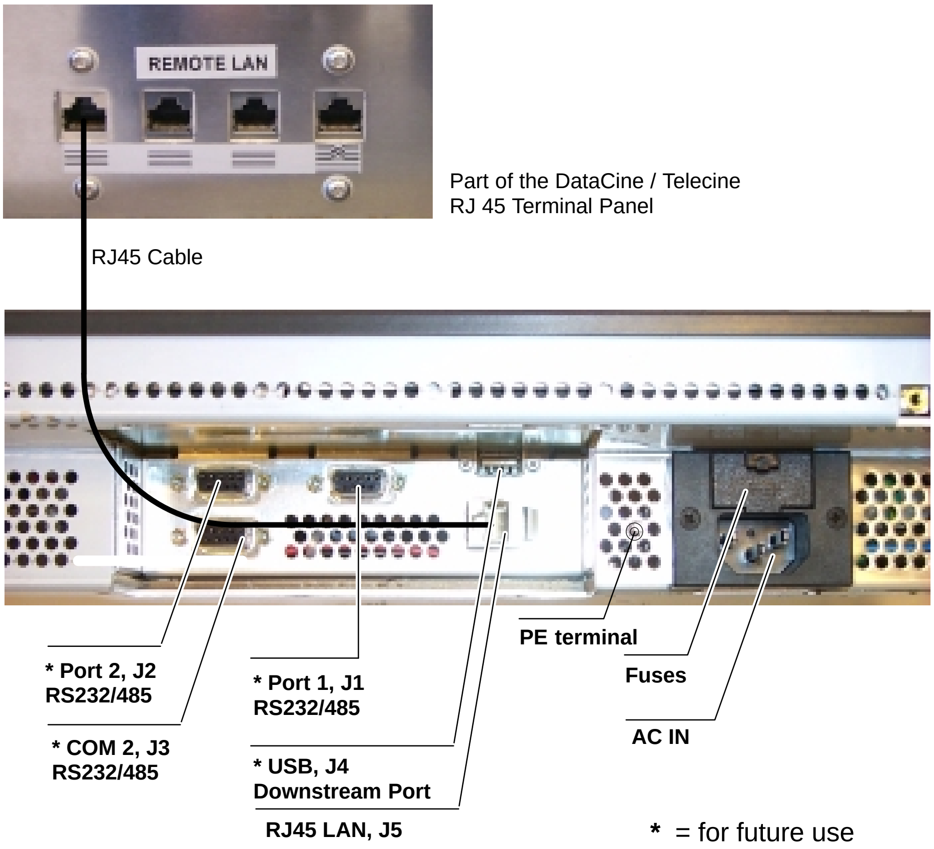


Fig. 9: Power and control connectors

For the control connection between the DataCine / Telecine and the GCP1, the following cable, supplied with the GCP1 has to be connected:

- For the **Shadow STE–B1**:
  Connect RJ45 patch cable from the rear RJ45 terminal panel of the Shadow to the LAN connector J5 of the GCP1.
- For the **Spirit SDC 2001**:
  Connect RJ45 patch cable from the rear RJ45 terminal panel of the Spirit to the LAN connector J5 of the GCP1.
  For the **Spirit SDC 2000** a RJ45/BNC adapter or a Hub with BNC connector has to be used to adapt the RJ45 cable to the Spirit‘s BNC connector!
- For the **Specter VDC 2000**:
  Connect RJ45 patch cable from the rear Micro HUB 1 (10Base-T) Port 4 of the Specter (PE cabinet) to the LAN connector J5 of the GCP1.

PE

The housing of the GCP1 panel is connected to protective earth (PE).

The panel has a PE terminal on rear. This PE terminal can be connected to a central earth system to prevent or eliminate EMC interferences.

3.5 SOFTWARE REQUIREMENTS

Shadow STE–B1:

For proper operation of the Shadow Telecine with the GCP, the Shadow software version has to be **2.21** (w/o Tk Mems)
2.37 or higher (with Tk Mems).

Spirit SDC 2000/2001:

For proper operation of the Spirit DataCine with the GCP, the Spirit software version has to be **4.21** (w/o Tk Mems)
4.36 or higher (with Tk Mems).

Specter VDC 2000:

For proper operation of the Specter Virtual DataCine with the GCP, the Specter software version has to be **3.1** or higher (with Tk Mems).

4. OPERATING

4.1 DISPLAY AND DIALOG BUTTONS

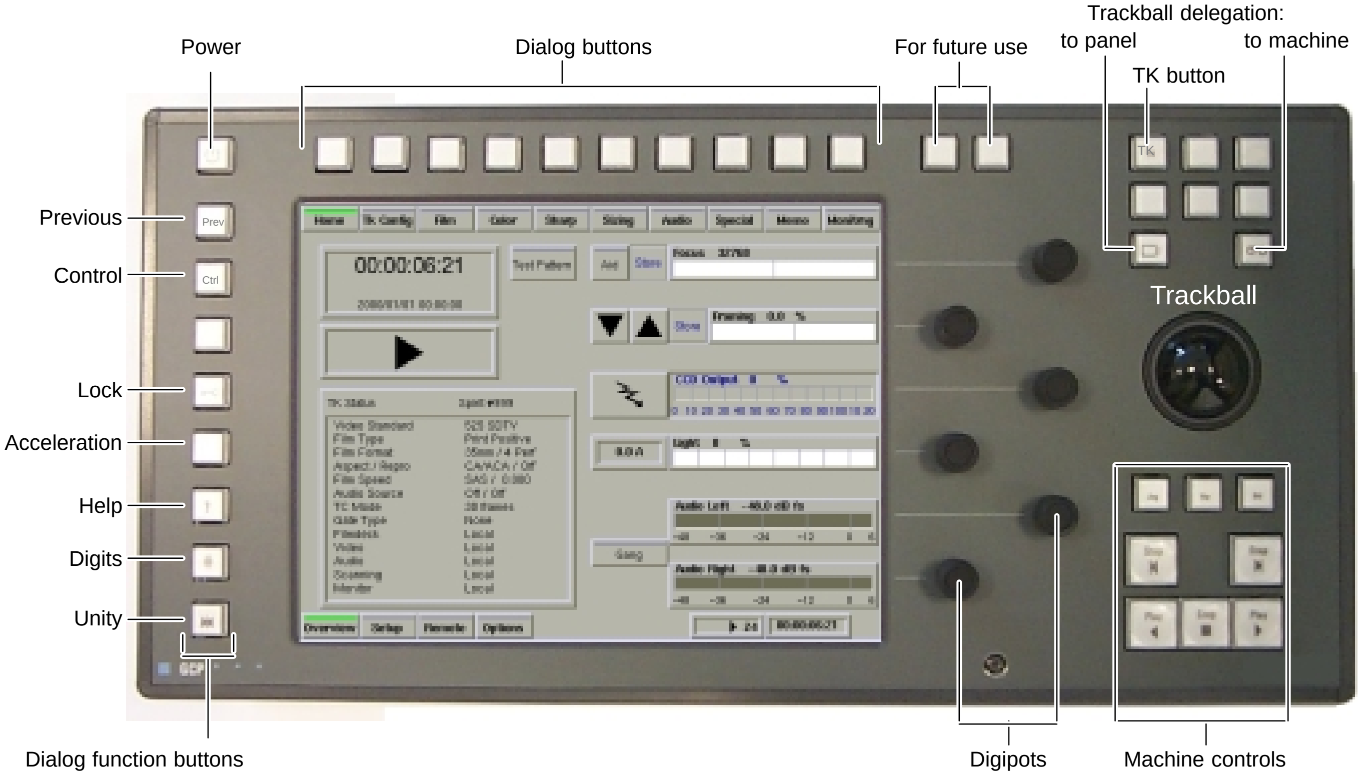


Fig. 10: Graphical Control Panel GCP1

The display is a TFT color display with a resolution of 640 x 480 Pixels and 256 colors. The visible display diagonal is approx. 26 cm (10.4 inches) is surrounded by the following controls:

- Power on / off button, see chapter 4.6.2
- 10 dialog buttons, see chapter 4.5
- 8 (7) dialog function buttons, see chapter 4.6.7 to 4.6.13
- 6 digipots, see chapter 4.6.14
- Machine control & Trackball delegation, see chapter 4.7

4.2 USING THE TOUCH SCREEN

To operate use your finger tips or the Thomson stylus, delivered with the standard accessories set.
Do not use pointed, sharp edged or metallic objects as they might damage the surface of the touch screen!

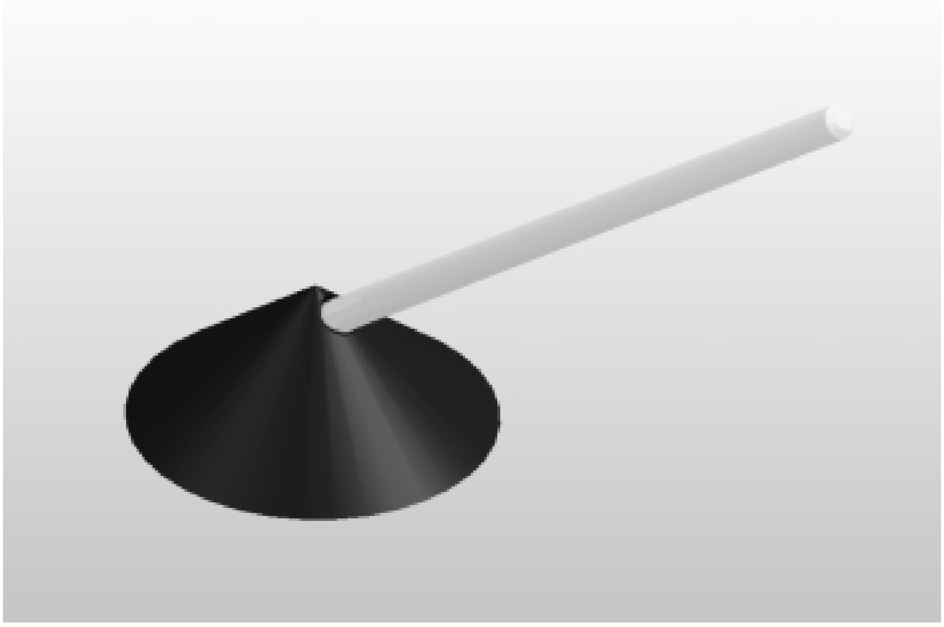


Fig. 11: Thomson stylus with holder

4.3 CLEANING THE TOUCH SCREEN

The .007” thick polyester layer of the touch screen has a hard coat material on the touch surface which resists scratches and is provided with an antiglare finish.
To clean use normal household cleaner only. By no means use products containing solvents, such as methylene chloride or benzyl alcohol which might damage the surface.

4.4 CALIBRATING THE TOUCH SCREEN

The touch screen of the GCP is calibrated in the factory. Anyway, if it is desired to recalibrate the touch screen, this is the procedure:

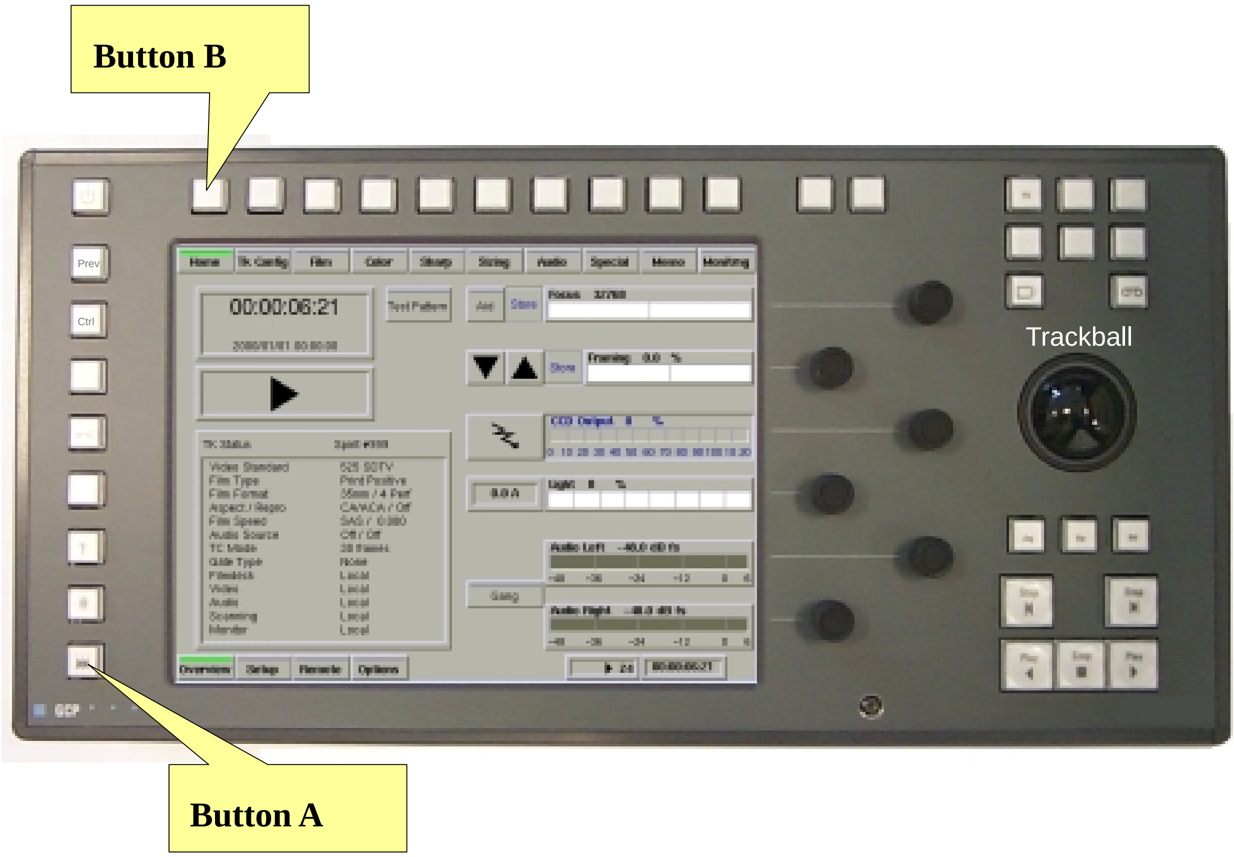
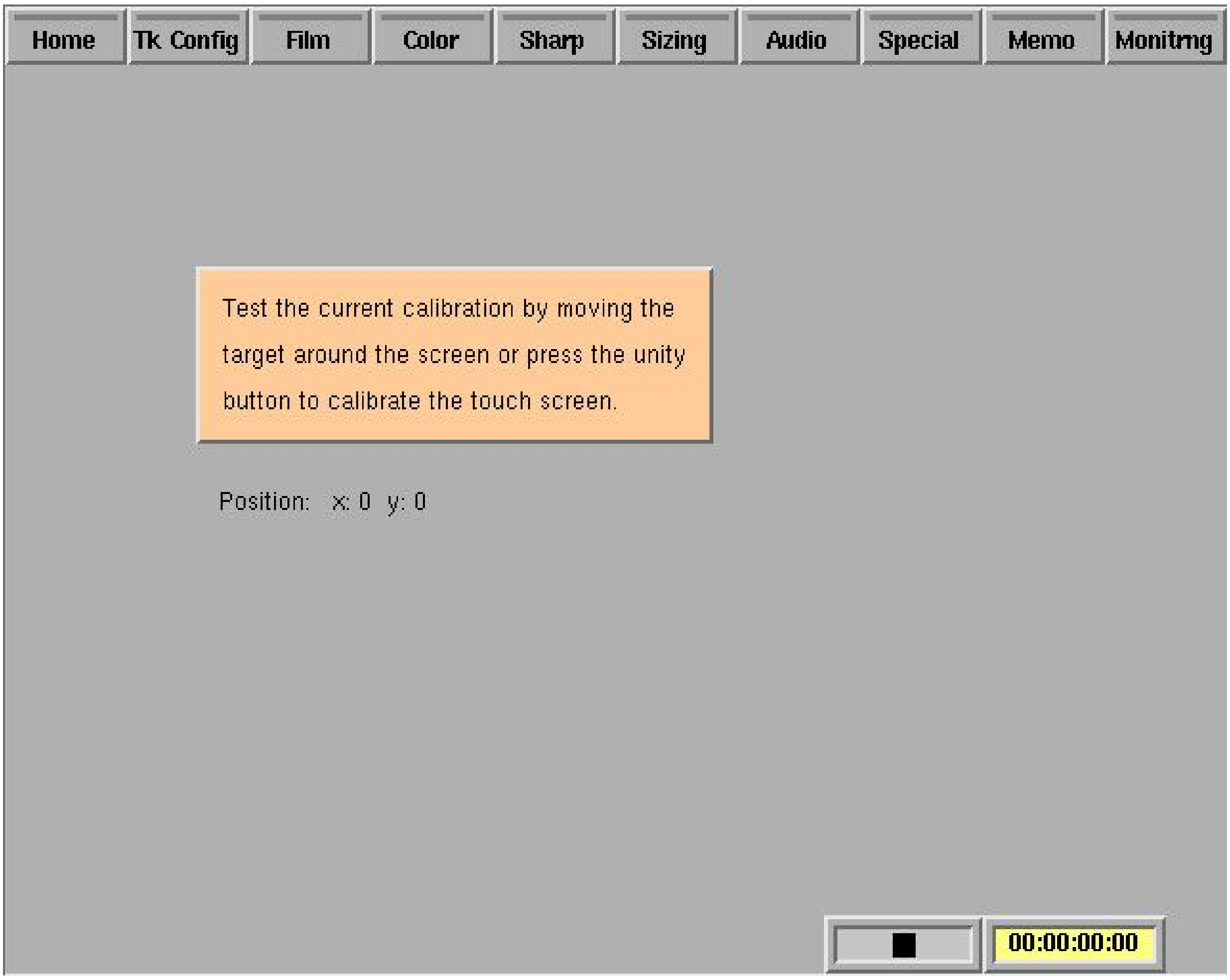


Fig. 12: Graphical Control Panel

To calibrate, press and hold down the UNITY button (Button A) and press the first dialog button (Button B). Release both buttons when the touchscreen calibration dialog has opened.



Test the current calibration by moving the target around the screen or press the unity button to calibrate the touch screen.

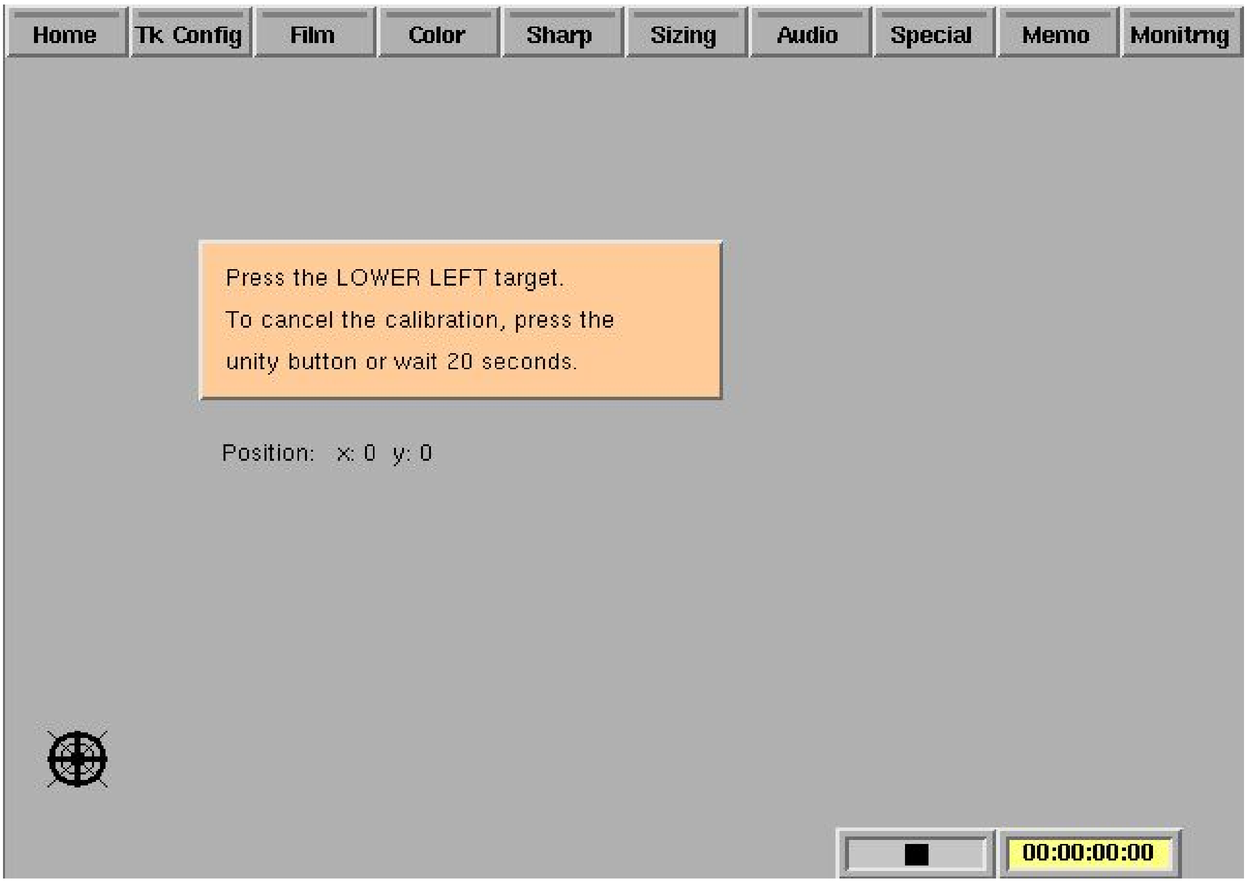
Position: x: 0 y: 0

Fig. 13: Touch screen calibration test dialog

You can check the current calibration by touching the screen and viewing the x and y position displayed in the middle of the screen. The screen resolution is 640 x 480, so if you touch the upper left corner, the position should be as near as possible to x:0, y:0 and in the lower right corner x:640, y:480.

To recalibrate the touch screen press the UNITY button (Button A) again.

A target shows up in the lower left corner of the display. Touch the target as exact as possible.

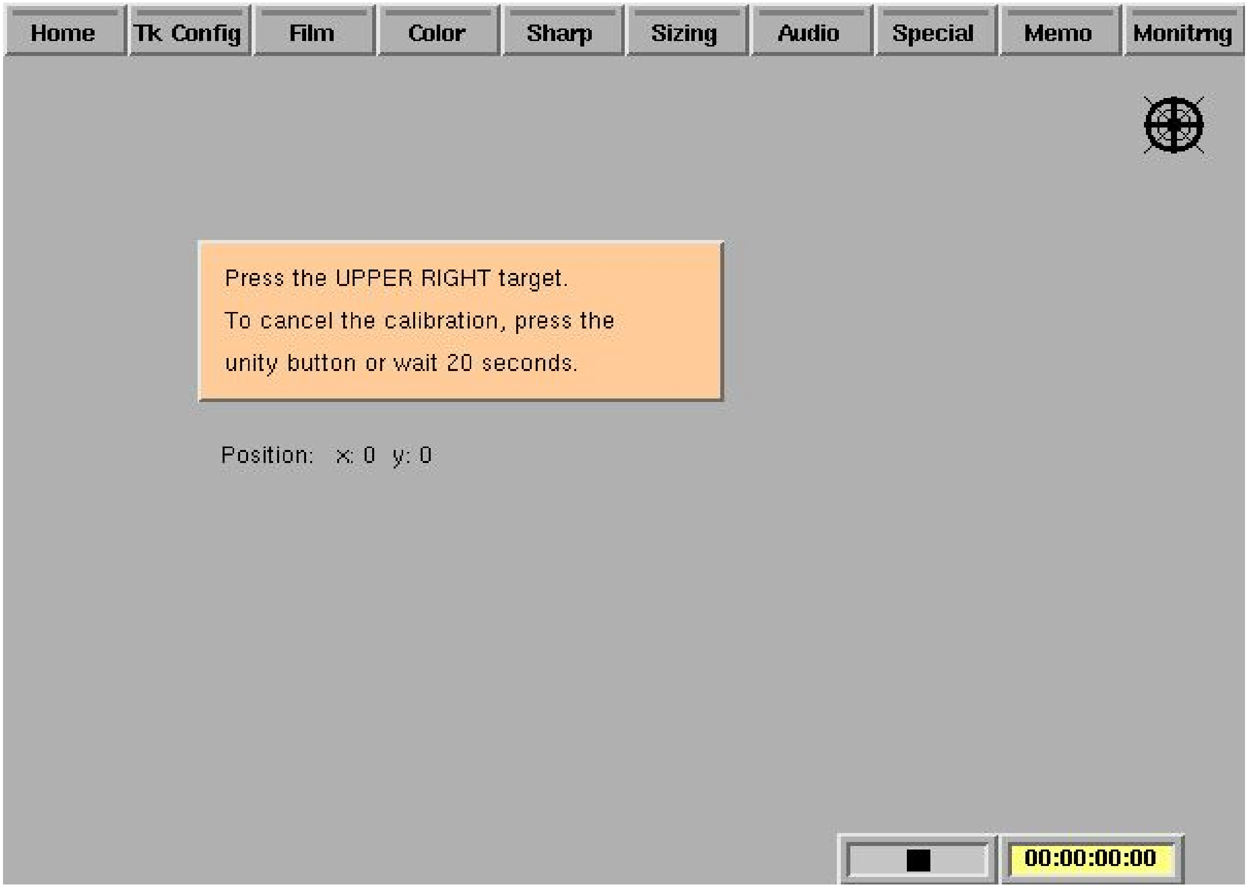


Press the LOWER LEFT target.
To cancel the calibration, press the
unity button or wait 20 seconds.

Position: x: 0 y: 0

Fig. 14: Touch screen calibration – step 1

Following that, the target moves to the upper right corner of the screen.



Press the UPPER RIGHT target.
To cancel the calibration, press the unity button or wait 20 seconds.

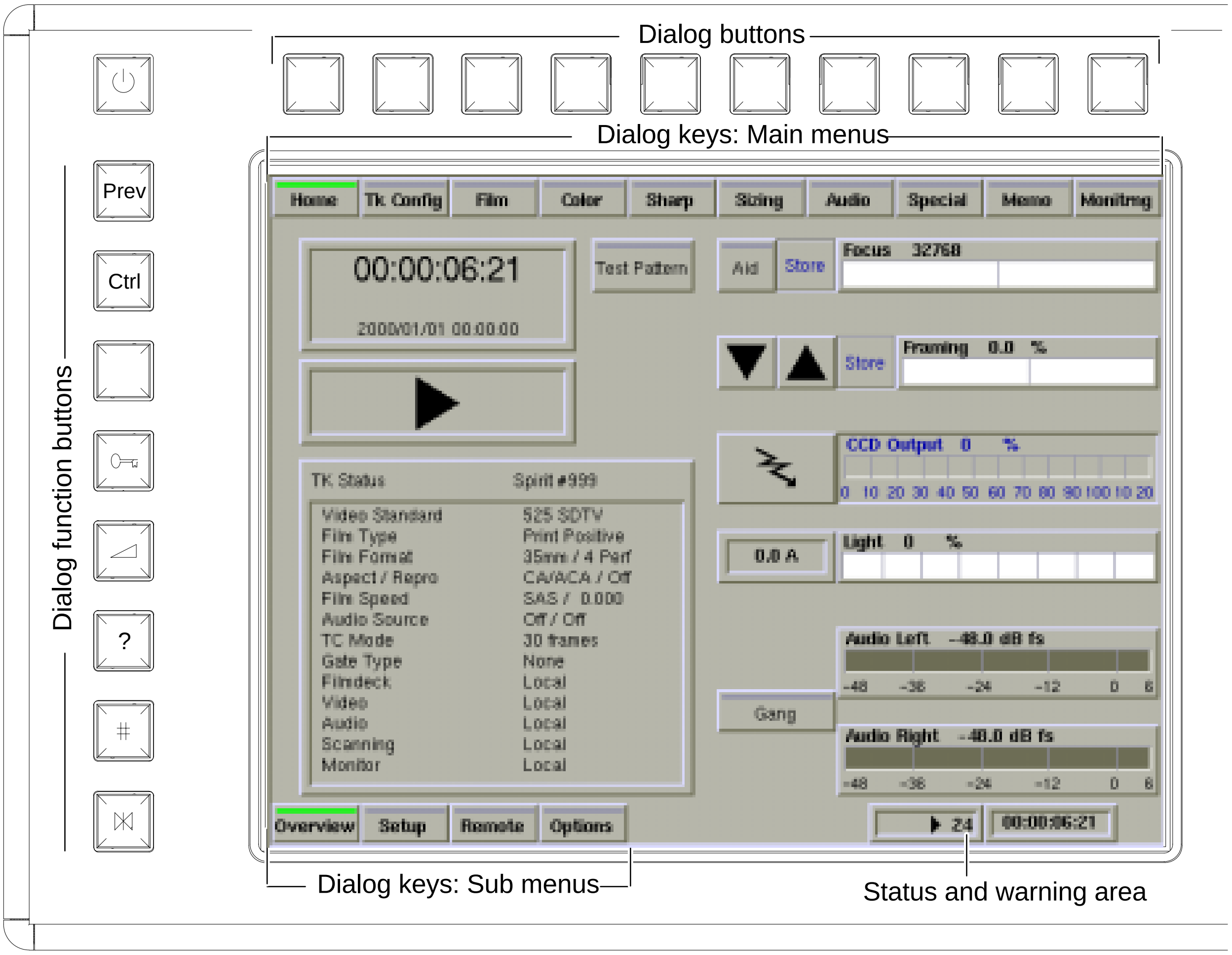
Position: x: 0 y: 0

Fig. 15: Touch screen calibration – step 2

Touch the target again. A long beep indicates that the calibration procedure was successful.

Press any dialog group selection button to leave the calibration dialog.

4.5 DIALOG BUTTONS AND KEYS



00:00:06:21

2000/01/01 00:00:00

Focus 32768

Framing 0.0 %

CCD Output 0 %

0.0 A

Light 0 %

Audio Left -48.0 dB fs

Audio Right -48.0 dB fs

24

00:00:06:21

TK Status	Spirit #999
Video Standard	525 SDTV
Film Type	Print Positive
Film Format	35mm / 4 Perf
Aspect / Repro	CA/ACA / Off
Film Speed	SAS / 0.000
Audio Source	Off / Off
TC Mode	30 frames
Gate Type	None
Filmdeck	Local
Video	Local
Audio	Local
Scanning	Local
Monitor	Local

Fig. 16: Example of a GCP menu

4.5.1 DIALOG BUTTONS

Above the touch–screen there are 10 DIALOG BUTTONS which are mainly used to select or toggle through the main menus. To enter a submenu just double–click on the DIALOG BUTTON or use the DIALOG KEYS on the bottom of the screen.

In some menu items a numerical keyline appears on top of the screen. In this case you may use the DIALOG BUTTONS to type in numerical values instead of using the digipots.
This feature is helpful to quickly enter exact values.

4.5.2 DIALOG KEYS FOR MAIN MENUS

On top of the screen there are 10 DIALOG KEYS which can be used for main menu selection. They are displayed alike in each menu. Pressing once the hard key (dialog button) on top has the same effect.
In some menu items the DIALOG KEYS are replaced by a numeric keyline. In this case the keys can be used to type in a value of a certain control.

4.5.3 DIALOG KEYS FOR SUB MENUS

On the bottom of the screen there are soft keys as well. They can be used for submenu selection. Each of these keys stands for a submenu which is available under the current main menu.
The names of the sub menus are displayed on the keys. It is also possible to enter a sub menu by pressing the dialog button several times.
In case a numeric keyline is active (in some menu items), the SUB MENU SOFT KEYS are replaced, they can then be used e.g. to enter or cancel a numerical value.

4.5.4 STATUS AND WARNING AREA

Always visible (in each dialog) in the lower right corner of the screen there are status displays containing the current transport mode, speed and timecode of the telecine.
The background color of the timecode display is Grey if the telecine is in play mode and the servo is locked, Yellow if the telecine is in play mode, but the servo is not locked, and Red if the telecine is not in stand by mode or no connection is established between the telecine and the GCP.
If an error occurs or the telecine sends a warning message, a warning sign is displayed as well in the lower right corner of the screen. Click on the warning sign to switch over to the Monitoring/Diagnosis menu to read the error message.
If a severe error occures, the warning sign flashes.

4.5.5 COLOR CODING AND STYLES WITHIN THE MENU

Color	**Function**	**Comment**
red	Attention	severe warning
yellow	Attention, unusual value	other warning
green	**on** state in the case of on/off buttons	
gray	Menu background	normal, general color
light gray	Displays	
white	Background of active option menus and sliders	
rised	Knobs, option menus, sliders and general controls	
sunken	Displays	
dark gray frame	Control flat with dark gray frames: Control cannot be used in this mode of operation.	
grooven frame	Control flat with grooven frames: Control locked	

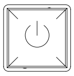
4.6 DIALOG FUNCTION BUTTONS

4.6.1 GENERAL

In general, the following is applicable:

Pressing one of the lower 5 FUNCTION BUTTONS (left to the touch–screen) affects the control operated within the last 5 seconds. In case no control was operated during the last 5 seconds, pressing the button once does not have any effect.
Double clicking one of the 5 FUNCTION BUTTONS affects all controls in the current dialog, e.g. double click the UNITY FUNCTION BUTTON sets all controls of the current menu to unity.
When pressing one of the buttons for 5 seconds, a dialog window opens and the corresponding FUNCTION BUTTON is lit. When pressing this button again, the dialog window disappears and the button is not lit anymore. The same happens if you click OK or Cancel in the dialog window. W Holding down one of the 5 FUNCTION BUTTONS and simultaneously clicking on some control has an effect on this control, e.g. to lock a certain control.
All dialogs windows are automatically closed after a certain amount of time (when no actions take place).

4.6.2 POWER BUTTON



To switch on the GCP, press the POWER BUTTON. Note: The boot up sequence takes about 2 minutes! While booting, the progress is indicated by the 10 buttons lamps which successively get lit. To check the boot messages on the display, hold down the DISPLAY BUTTON.
To see the boot messages permanently, hold down the DISPLAY BUTTON and simultaneously press the ”0” BUTTON.
Press once the POWER BUTTON during operation, to display the LOGIN MENU page.
This page serves to add or delete NEW USER and to choose and delete USER PROFILES.

4.6.3 NEW USER

Click on the USER Key, a drop down menu opens containing all existing users. To add a NEW USER click on <new user>. A two–lined keypad is activated on top of the screen. Type in the NAME and confirm by hitting OK. Now you are requested to enter a PASSWORD. Type it in (Maximum: 8 characters) and confirm by hitting OK. It is also possible to hit OK without having entered a PASSWORD. If a user wants to log in, the password is requested.
The current USER is shown on the key display.

4.6.4 USER PROFILES

The settings of the different USER PROFILE keys are stored under the currently active USER.
The sound for KEY CLICK or END OF RANGE can be turned on or off, SCREENSAVER and MENU TIMEOUT can be set from one minute to one hour (in steps) or switched off. To change settings click on the keys and make your choice from the drop down menu.
The current setting is shown on the key display.

4.6.5 DISPLAY AND BUTTON ILLUMINATION

On the right side of this page you find the DISPLAY and the BUTTON illumination sliders.
Find a setting which suits most the surrounding light condition of the GCP. The range is from 0 – 100%. To change slide on the touchscreen or use the corresponding digipots.

4.6.6 SHUTDOWN BUTTON

Hit the SHUTDOWN BUTTON to switch off the GCP. This is the recommended shutdown procedure!
By pressing the POWER BUTTON for about 5 seconds, the GCP is cut from the power supply. This shuts down the panel improperly and is therefore not recommended!

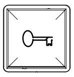
4.6.7 PREVIOUS BUTTON

This button has two functions:
1. To navigate between menu pages. To switch back to the previously selected menu page, the button has to be pressed once. This can be repeated several times to toggle through a number of previously selected menu pages. To come back to the currently operated menu press the button for two seconds.
2. To toggle between different settings/selections of one control. Some selections require observation on the picture monitor. Using the PREVIOUS BUTTON allows you to toggle through all possible settings without having to look at the GCP display. E.g. Masking Mems, Aspect Formats, Film Types, etc.

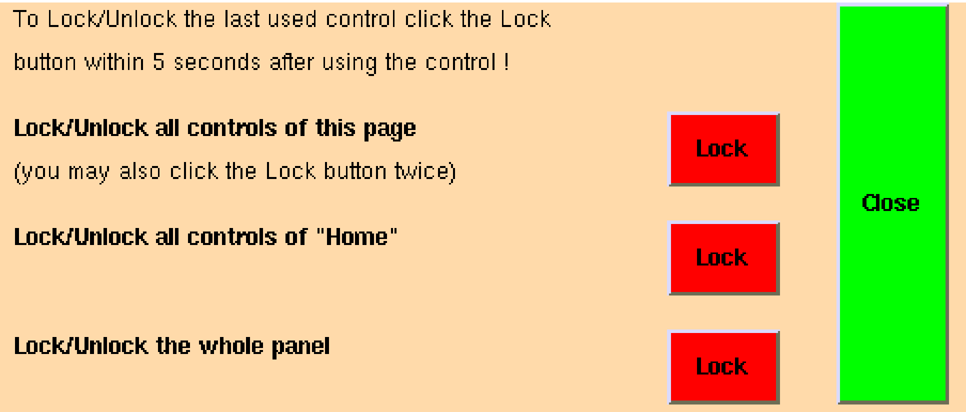
4.6.8 CONTROL BUTTON

The CONTROL BUTTON allows to get or abort control over the telecine.
Press once the CONTROL BUTTON to control all functional groups (Film Deck, Video, Audio, Scanning, Monitor) of the telecine. In this case the CONTROL BUTTON is lit. Press once again to abort control, the button lamp is then switched off.

4.6.9 LOCK BUTTON



TThe LOCK BUTTON allows to lock and unlock controls. It is possible to lock a single control, a menu page, a whole menu or the whole panel. A locked control is grayed out on the display and can’t be used until it gets unlocked again; it is thus save from unintentional modifications.
To lock/unlock the control used last, press the lock button once. (Has to be done within 5 seconds after using the control.)
Another way to lock/unlock a single control is to hold down the LOCK BUTTON and simultaneously touch the respective control on the screen.
To lock or unlock the whole page, double click the LOCK BUTTON. To generally lock or unlock press the LOCK BUTTON until a popup window opens containing keys to lock or unlock the whole page, the whole menu and/or the whole panel. Click on the keys to lock/unlock the different units. If the controls are locked the key display reads ”Unlock”, if the controls are unlocked it reads ”Lock”. Hit Close to exit the window.



To Lock/Unlock the last used control click the Lock button within 5 seconds after using the control !

Lock/Unlock all controls of this page

(you may also click the Lock button twice)

Lock/Unlock all controls of "Home"

Lock/Unlock the whole panel

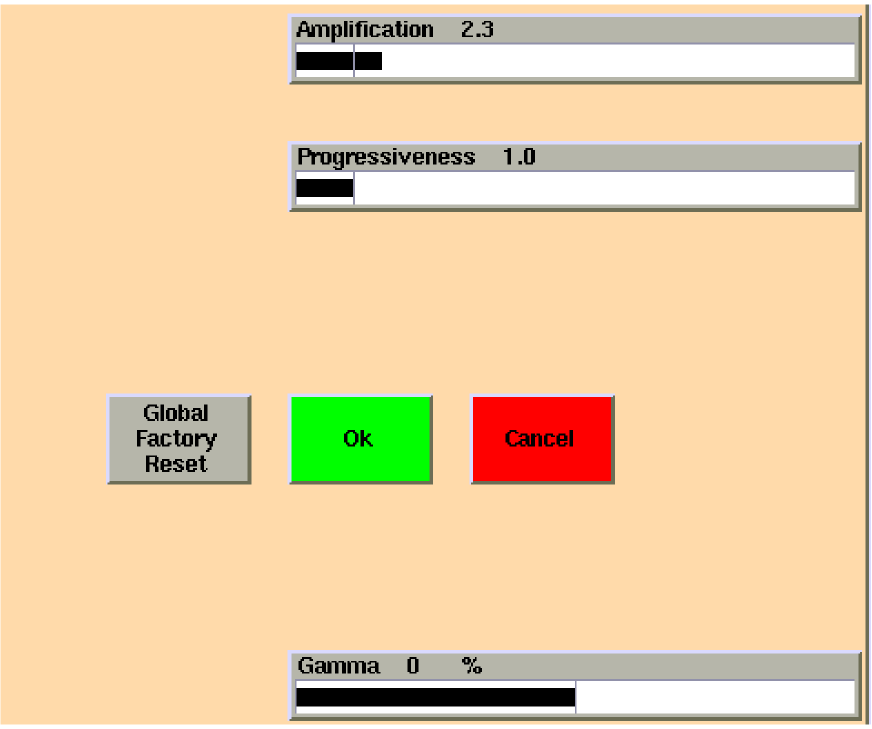
Fig. 17: Lock button pop-up dialog

4.6.10 ACCELERATION BUTTON

The Acceleration button serves to adjust the digipot or trackball sensitivity.

To adjust the characteristics of the last used control, press the ACCELERATION BUTTON once
or hold down the ACCELERATION BUTTON and simultaneously touch the respective control on the screen.

A dialog window opens offering tools to adjust the sensitivity of the digipots. This is done by altering the AMPLIFICATION and/or PROGRESSIVENESS mode.
The setting of each GUI control can be adjusted separately to achieve a differentiated behavior.
The currently modified control is displayed at the bottom of the dialog and can be used to check the altered adjustments. If you are happy with your modification hit OK, if not hit Cancel.
Hitting either key closes the dialog window.



Amplification 2.3

Progressiveness 1.0

Gamma 0 %

Fig. 18: Acceleration dialog window

- **Amplification**

The more you turn the digipot or the trackball (of the respective control), the bigger the resulting adjustment.
With AMPLIFICATION you define the factor, the increments coming from the digipot or trackball are multiplied with. The amplification range is from 0 to 100. That means the lower the factor, the more increments the digipot or trackball has to deliver to achieve the same result.
That is for fine adjustment. Low amplification values are apt for fine adjustments; high values are apt for coarse adjustments.

- **Progressiveness**

The faster you turn the digipot or trackball (of the respective control), the bigger the resulting adjustment. The PROGRESSIVENESS range is from 0 to 100.
With PROGRESSIVENESS, you control the efficiency of turning speed of the digipot or trackball The lower the progressiveness, the faster you have to turn the control to change a value.
(For fine adjustment). Higher progressiveness needs less turning speed to achieve the same result. (For coarse adjustment).

- **Ok**

If you are happy with your recent modification of the control settings hit OK.
The new settings are valid from now on (stored) and the dialog window is closed.

- **Cancel**

Hit CANCEL to abort the recent modifications. The dialog window closes.

- **Global Factory Reset**

If you want to return to the factory defaults click on the GLOBAL FACTORY RESET key.
Hit the OK button after the popup confirmation request. This will set the sensitivity of all controls to factory default.
If you want to recall the factory settings of one single control hold down the UNITY BUTTON and simultaneously touch the AMPLIFICATION and/or PROGRESSIVENES sliders. This will bring back the factory default of this specific control.
Everything described also applies to the trackball.

4.6.11 HELP BUTTON

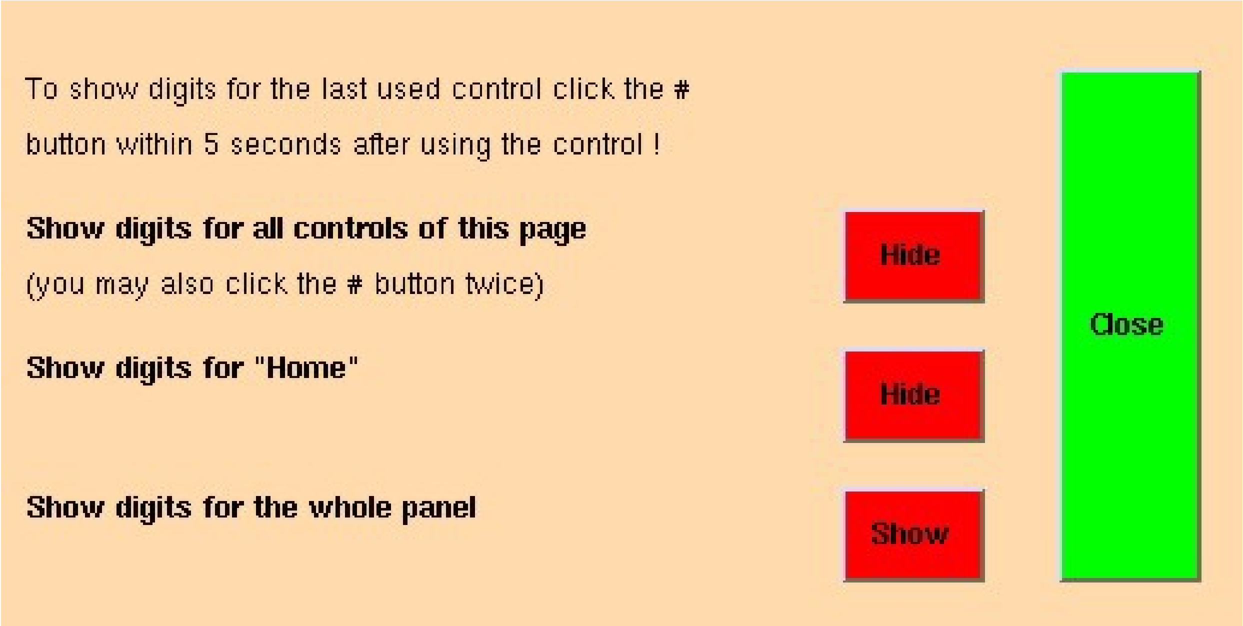
?

The HELP BUTTON serves to display a file containing information related to the currently operated control.
Press the HELP BUTTON once to show the help file related to the control operated last.
Another way to show the help file is to hold down the HELP BUTTON and simultaneously touch the respective control on the screen.
To show a help file of a whole menu page, doubleclick the HELP BUTTON. Use the digipots to scroll through the whole file content.
To exit the help file display click press the HELP BUTTON once again.

4.6.12 DIGITS BUTTON

#

TThe DIGITS BUTTON allows to show, hide and select the type (code values or percent values) of the numerical display of values.
To show/hide the numerical value of the control used last, press the DIGITS BUTTON once.
(Has to be done within 5 seconds after using the control.)
To show/hide/select the numerical value of a single control, hold down the DIGITS BUTTON and simultaneously touch the respective control on the screen.
To show/hide the numerical value of a whole menu page, double click the DIGITS BUTTON.
To generally show/hide numerical values, press the DIGITS BUTTON until a popup window opens containing keys to show/hide the numerical values of the whole page, the whole menu and/or the whole panel. Hit Close to exit the window.



To show digits for the last used control click the # button within 5 seconds after using the control !

Show digits for all controls of this page
(you may also click the # button twice)

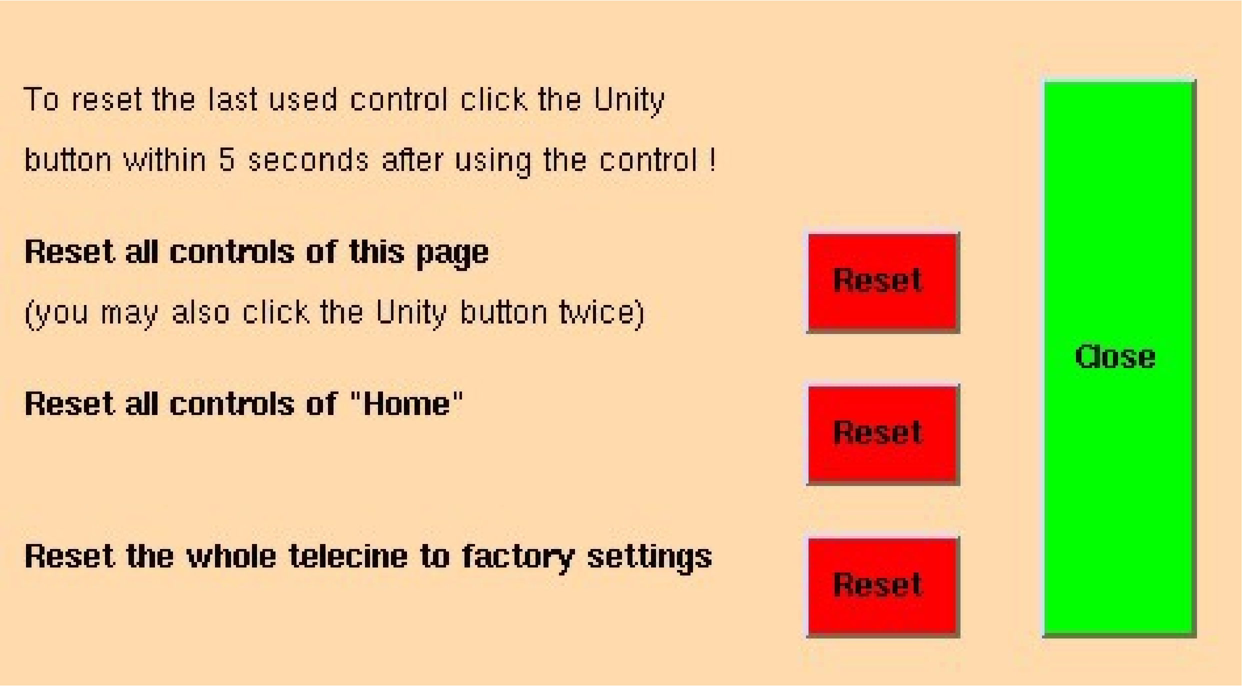
Show digits for "Home"

Show digits for the whole panel

Fig. 19: Digit button pop-up dialog

4.6.13 UNITY

The UNITY BUTTON allows to reset controls.
To reset the control operated last, press the UNITY BUTTON once. (Has to be done within 5 seconds after using the control.)
To reset a single control, hold down the UNITY BUTTON and simultaneously touch the respective control on the screen.
To reset the whole page, double click the UNITY BUTTON.
To perform a global reset, press the UNITY BUTTON until a popup window opens containing keys to reset the whole page, the whole menu and/or the whole panel. Hit Close to exit the window.



To reset the last used control click the Unity button within 5 seconds after using the control !

Reset all controls of this page
(you may also click the Unity button twice)

Reset all controls of "Home"

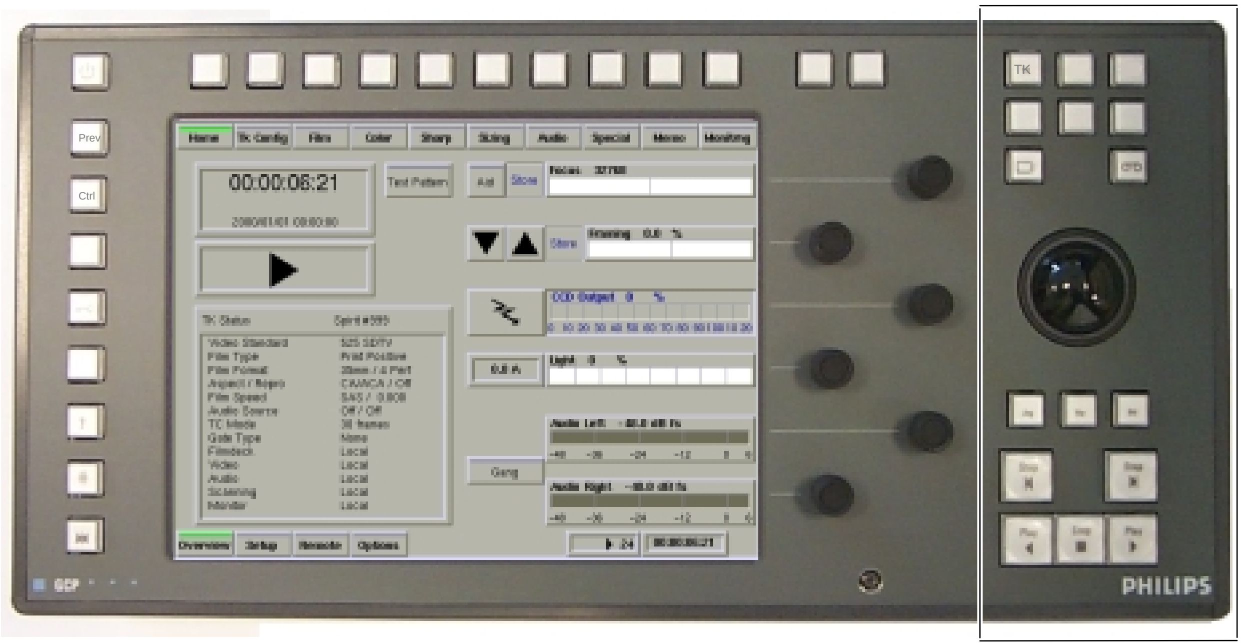
Reset the whole telecine to factory settings

Fig. 20: Unity button pop-up dialog

4.6.14 DIGIPOTS

On the right side of the touchscreen there are 6 digipots. They can be used to alter values or to scroll in status windows. The digipots are assigned to the controls of the currently selected menu.
Dialing a digipot has the same effect as sliding the control on the touch screen.

4.7 MACHINE CONTROL SECTION



Machine control section

Fig. 21: Graphical Control Panel GCP

Machine Control Section

The Machine Control Section is located in the lower right corner of the GCP.
All buttons (including the trackball – if delegated) perform transport functions of the telecine. Undeclared buttons are currently not in use.

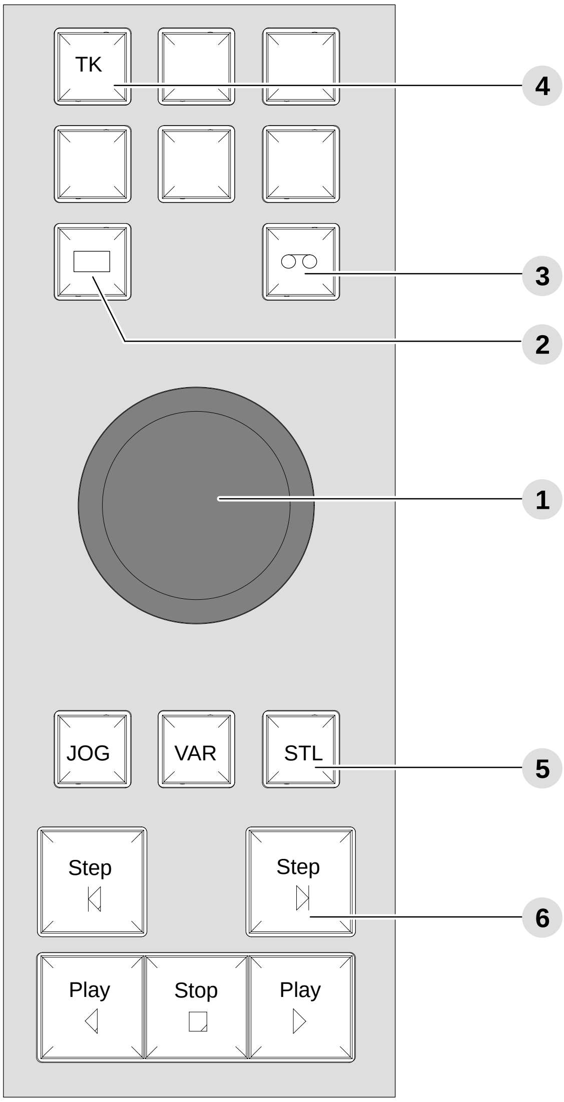


Fig. 22: Machine control section

1 Trackball

2 Display button for trackball delegation to GUI

3 Machine button for trackball delegation to machine control

4 1 button for the machine selection (TK)

5 3 buttons for Machine-Mode-Selection (Jog, Var, Shuttle)

6 5 machine-control-buttons (play, reverse play, step forward/backward, stop)

Undeclared buttons are not in use!

TK Button

To control the telecine press the TK BUTTON (Button gets lit). All transport controls are now delegated to the telecine.

Display Button

Below the trackball on the left you find the DISPLAY BUTTON. Pressing this button delegates the trackball to the GUI (graphical user interface).

Machine Deck Button

Below the trackball on the right you find the MACHINE DECK BUTTON. Pressing this button delegates the trackball to the machine (TK) for shuttle, jog or variable speed control.

Trackball

The trackball can be used for various functions.
Delegation of the trackball is done as follows:
Pressing the DISPLAY BUTTON delegates the trackball to the next control in the current dialog which can receive trackball input (only possible if there is any control). Moving the trackball has the same effect as sliding the corresponding control on the touch–screen.
Pressing the MACHINE DECK BUTTON delegates the trackball to the selected machine (TK).
In this mode the trackball can be used as a SHUTTLE/JOG/VARI speed control.

Jog, Var, Shuttle Buttons

3 buttons for the transport mode selection (JOG, VAR and SHUTTLE) are below the trackball.
With MACHINE DECK enabled the trackball controls the telecine in the selected mode.

Step Forward, Step Backward, Play Reverse, Stop, Play Forward

The hard keys for film deck control of the telecine are located below the SHUTTLE/ JOG/VARI speed buttons (Step forward, Step backward, Play, Play reverse and Stop).

4.8 SOFTWARE INSTALLATION

Software installation and all service works must be carried out by qualified service personnel only!

4.8.1 SOFTWARE UPDATE WITH “SDCMAINT”

To load a new software version into the GCP the Diagnostic Kit **SDCMAINT**, FH 1660, order no. 0 128 166 000 is required.
Use the included customer’s manual “SDC MAINT” (Diagnosis & Maintenance Tool) Documentation no. FU 0058 , order no. 0 126 625 800.

4.8.2 SOFTWARE UPDATE WITH “FTP” (FILE TRANSFER PROTOCOL)

1. Determine the IP address of the GCP:
   On the GCP press and hold down the #–key and then press the dialog button above the dialog key “Home”;
   Write down the displayed IP address of the GCP, e.g. **192.168.11.102.**
2. Set the IP address of your computer (notebook) to be in the same Class C-network as the GCP (e.g. **192.168.11.1**).

   Attention: Do **not** use the same IP address for your computer and the GCP!
3. Connect your computer to the telecine network and reboot it.
4. Open a MS DOS command shell and change to the directory where the new GCP software **gcp.tgz** is stored.
5. Start the FTP application:

   ftp <ip–adresse gcp> <enter> (e.g. **ftp 192.168.11.102 <enter>**)

6. Input the user ID and the password for FTP login:

   user id: **gcpftp <enter>**
   password: **gcpftp <enter>**

7. Set the file transmission mode to binary: **bin <enter>**
8. Transfer the file **gcp.tgz** to the GCP: **put gcp.tgz <enter>**
9. Close the FTP application: **bye <enter>**
10. Close the MS DOS command shell.

The GCP now automatically finishes the software installation and restarts the application.

4.9 SAVING CONFIGURATIONS

All panel setups are restored after a software installation.
The feature “saving configurations” is not yet implemented.

4.10 REMOTE OPERATION WITH SEVERAL REMOTE PANELS

If a film scanner has to be controlled from several remote panels (FCP and GCP), consider the following:

In order to avoid problems with parallel operation, the default setting of the GCP should always be REMOTE 2. When changing the remote address of the GCP, the film scanner has subsequently to be restarted.

5. MENU CONTROL

OVERVIEW FOR SPIRIT DATACINE & SHADOW TELECINE

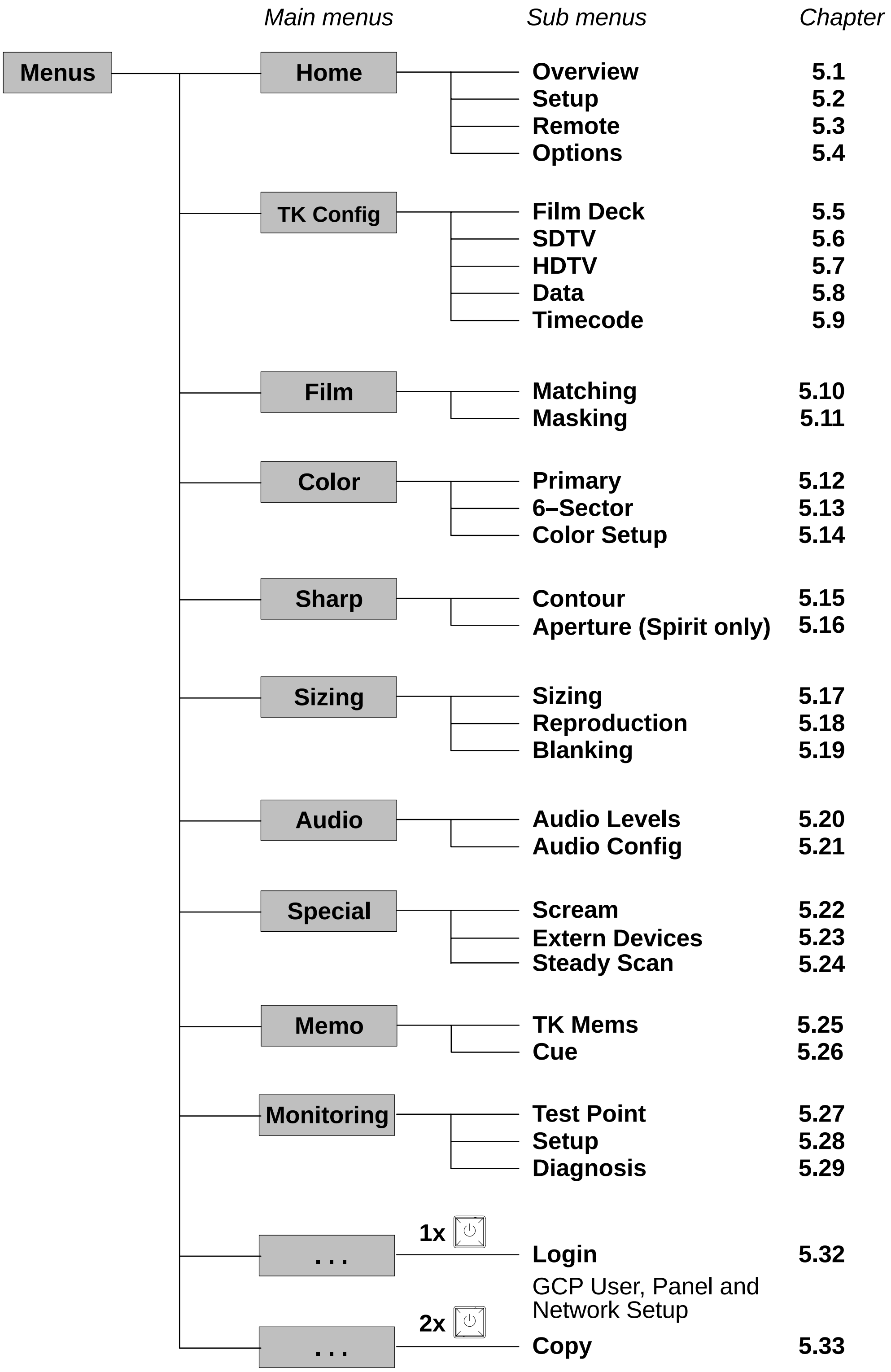
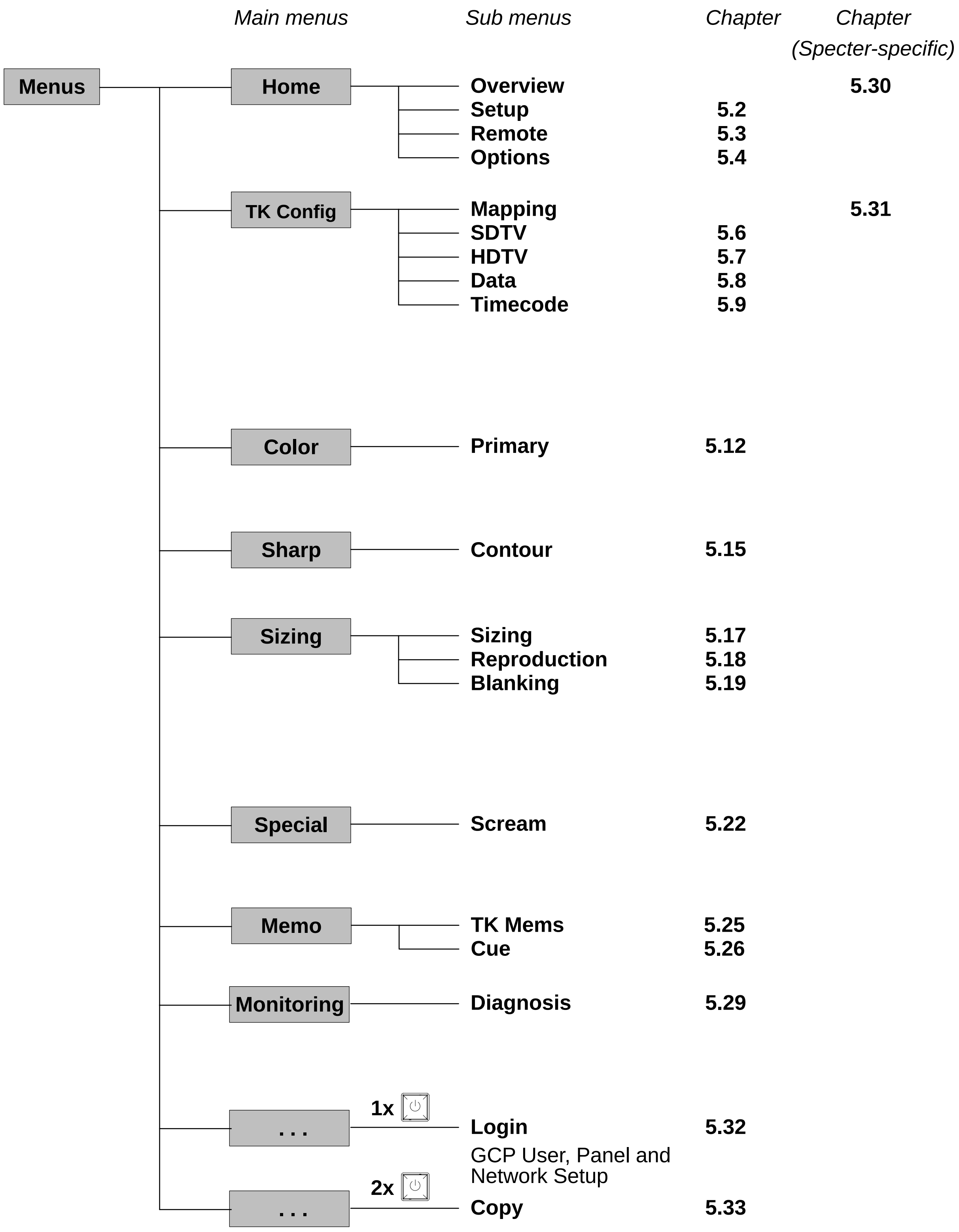


Fig. 23: GCP Menu tree **Spirit & Shadow**

OVERVIEW FOR SPECTER VIRTUAL DATACINE (VDC)



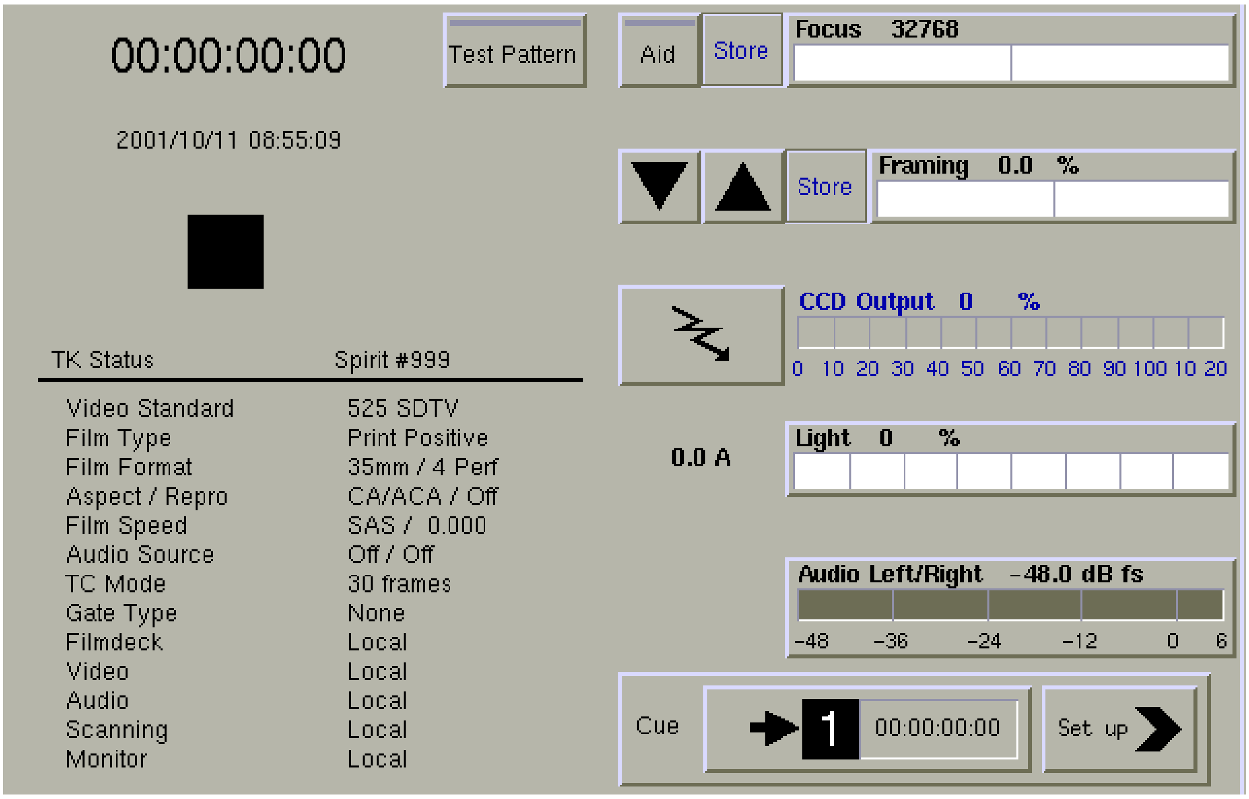
Menus

Main menus	*Sub menus*	*Chapter*	*Chapter (Specter-specific)*
Home	**Overview**		**5.30**
	Setup	**5.2**	
	Remote	**5.3**	
	Options	**5.4**	
TK Config	**Mapping**		**5.31**
	SDTV	**5.6**	
	HDTV	**5.7**	
	Data	**5.8**	
	Timecode	**5.9**	
Color	**Primary**	**5.12**	
Sharp	**Contour**	**5.15**	
Sizing	**Sizing**	**5.17**	
	Reproduction	**5.18**	
	Blanking	**5.19**	
Special	**Scream**	**5.22**	
Memo	**TK Mems**	**5.25**	
	Cue	**5.26**	
Monitoring	**Diagnosis**	**5.29**	
. . .	**1x** ⏻ **Login** GCP User, Panel and Network Setup	**5.32**	
. . .	**2x** ⏻ **Copy**	**5.33**	

Fig. 24: GCP Menu tree **Specter VDC**

5.1 MAIN MENU “HOME” / SUBMENU “OVERVIEW” (SPIRIT & SHADOW)

This menu is for general set-up of the Spirit DataCine/ Shadow Telecine.



TK Status	Spirit #999
Video Standard	525 SDTV
Film Type	Print Positive
Film Format	35mm / 4 Perf
Aspect / Repro	CA/ACA / Off
Film Speed	SAS / 0.000
Audio Source	Off / Off
TC Mode	30 frames
Gate Type	None
Filmdeck	Local
Video	Local
Audio	Local
Scanning	Local
Monitor	Local

Fig. 25: Main menu **“Home”** / submenu **“Overview” (Spirit / Shadow)**

Time Code Status Window	**see 5.1.1**
Film Deck Status Window	**see 5.1.2**
TK Status Window	**see 5.1.3**
Test Pattern	**see 5.1.4**
Focus, Store, Aid	**see 5.1.5**
Framing fine, Framing coarse, Store	**see 5.1.6**
CCD Output Level, Light, Shot	**see 5.1.7**
Audio Left/Right	**see 5.1.8**
Cue / Cue Timecode, Set up	**see 5.1.9**

5.1.1 TIME CODE STATUS WINDOW

It shows the current time code of the telecine and the current system date and time.
Time code can be changed in TK Config/Timecode menu.
Date and time can be set in Home/Setup menu.

5.1.2 FILM DECK STATUS WINDOW

The actual telecine status is shown by symbols. Filmdeck functions are only available via hard key on the right bottom side.

5.1.3 TK STATUS WINDOW

It shows the type and number of the device connected and the major device settings (e.g. lensgate). Those can be changed on the respective pages.

5.1.4 TEST PATTERN

On this page, test signals can only be switched on or off. Test Pattern SELECTION is to be found in the Home/Setup, Color/Setup or in the Monitoring menus. The function is active when the bar on the button is yellow. Patterns are used for engineering purposes but are also useful for quick diagnosis of system problems.
If you are using a Scream (HD noise reducer) there is a second source for Test Patterns.
To avoid confusion, ”HDNR Pattern” will be displayed on the selection key in case the test signal is generated in the Scream.

5.1.5 FOCUS, STORE, AID

The Focus slider controls the focus servo in the telecine.
Focussing can be done either with the digipot control or by sliding on the touchscreen.
To make focussing easier, hit the AID button. This macro function sets zoom and contour to maximum and slows down the film speed to 6 frames per second. Thus, film grain will appear as large and clear as possible which helps to find the optimum focus position.
If the chosen value is very different from the unity setting, this should be saved as the new default. Hitting the STORE button opens a dialog window. With OK, your new setting will be stored and recalled next time when UNITY is pressed.
The default focus setting is important as this value is used during FPN (Fixed Pattern Noise) and affects the quality of the FPN.

5.1.6 FRAMING FINE, FRAMING COARSE, STORE

This function serves to achieve a correct vertical picture position.
The FRAMING COARSE buttons (arrows up and down) are for 35mm film only as they move the image one perforation hole up or down. (However, good working practice is to make sure that the frame bar of the film is laced up with the crossed lines on the sprocket wheel.)
The FRAMING FINE sliders allow neat vertical positioning for all film formats.
This can be done either with the digipot control or by sliding on the touchscreen.
Pressing the STORE button enables the current setting to be stored and recalled if you hit UNITY.

5.1.7 CCD OUTPUT LEVEL, LIGHT, SHOT (FLASH)

CCD Output is the signal level derived from the scanner head. This is set using LIGHT which is the illumination or light level of the film. The aim is to achieve that sufficient light is available to capture D–Min (minimum density) of the negative or D–Max (maximum density) on a Print.

The CCD Output level should be up to 100%.

Spirit: The maximum lamp current is 25, but it should not be more than 21 amps to achieve 100%. Higher current values are an indication of an aging lamp. You should be aware that too high a current shortens the life of the lamp.

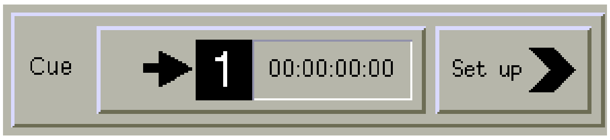
Shadow: The light is controlled by a gray scale wheel and not via the lamp current.

The FLASH button sets the light level in such a way that a sufficient signal is derived from the scanning head. You may push it a few times to bring the CCD Output signal to 100%.

5.1.8 AUDIO LEFT/RIGHT (OPTION)

Audio output level adjustment can be done either with the digipot control or by sliding on the touchscreen. Audio range is from –48 dB fs to +6 dB fs (fs = Full Scale). A level meter shows the current level and a peak hold value of the actual program sound or test tone.
For more details see the Audio/Configuration menu.

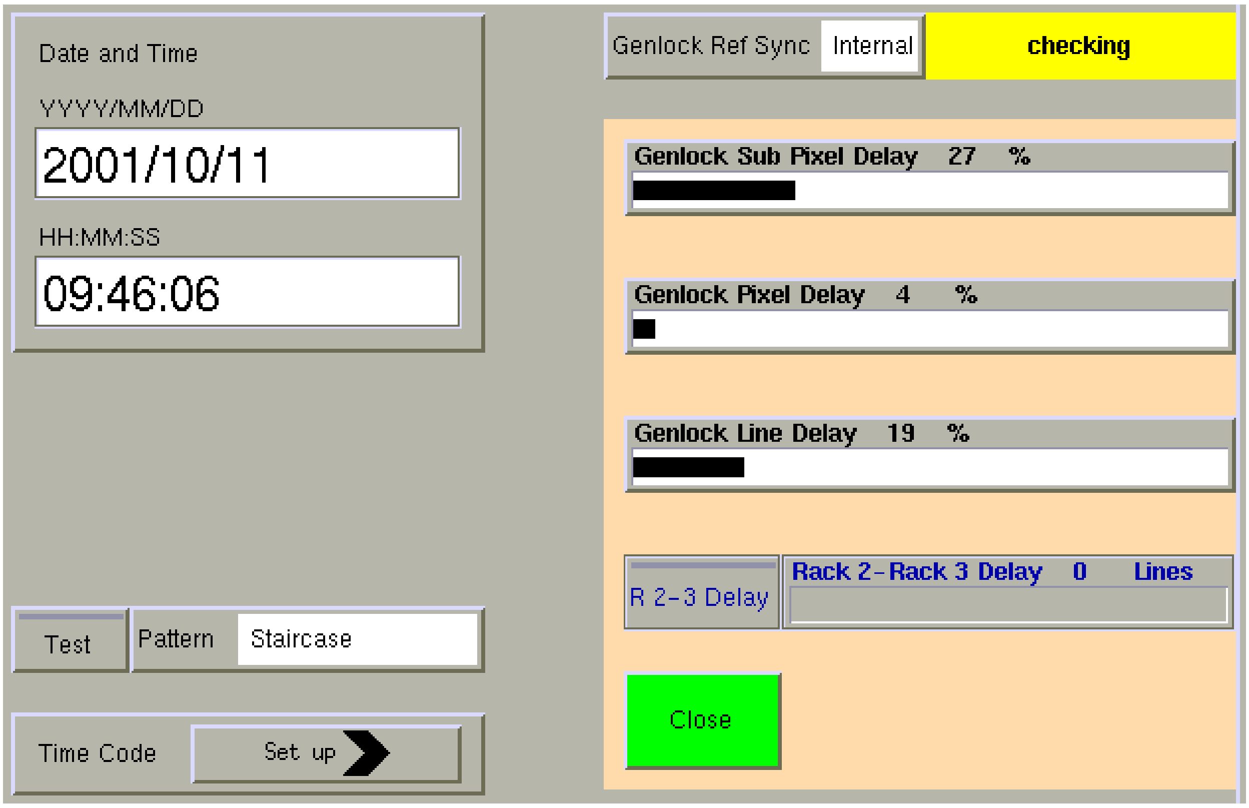
5.1.9 CUE / CUE TIMECODE, SET UP



Press the Cue button to cue the Telecine to the defined timecode visible in the button display.
If no cue point is defined or if the Set up button is pressed, the main menu “Memo” submenu “Cue” for set up of the cue points is opened, as described in section 5.26.

5.2 MAIN MENU “HOME” / SUBMENU “SETUP”

This menu is for engineering settings.



Date and Time

YYYY/MM/DD 2001/10/11

HH:MM:SS 09:46:06

Pattern Staircase

Genlock Ref Sync Internal

checking

Genlock Sub Pixel Delay 27 %

Genlock Pixel Delay 4 %

Genlock Line Delay 19 %

Rack 2-Rack 3 Delay 0 Lines

Fig. 26: Main menu **“Home”** / submenu **“Setup”**

Date and Time	**see 5.2.1**
Test Patterns	**see 5.2.2**
Genlock Ref Sync	**see 5.2.3**
Genlock Sub Pixel Delay	**see 5.2.4**
Genlock Pixel Delay	**see 5.2.5**
Genlock Line Delay	**see 5.2.6**
R 2 – 3 Delay	**see 5.2.7**
Time Code Set up	**see 5.2.8**

5.2.1 DATE AND TIME

Here you can set date and time. Touching the area activates a numeric keyline on top of the screen and confirmation options at the bottom.

5.2.2 TEST PATTERNS

When Test is enabled, the yellow bar on the key is lit. By pressing the adjacent PATTERN KEY, a drop–down menu opens containing all available Test Patterns. To select a pattern, click on it.
The current selection is shown on the key display.
If it reads ”HDNR Pattern”, a Scream Test Pattern is active.
This function is redundant in the Monitoring and in the Color/Setup Menu.

5.2.3 GENLOCK REF SYNC

This selects the sync input the machine is locking to. There are internal, external or serial references available.

5.2.4 LINE DELAY

Shifts the output signal in relation to the reference sync vertically (in the LINE grid).
To change setting, slide on the touchscreen or use the digipot control.

5.2.5 PIXEL DELAY

Shifts the output signal in relation to the reference sync horizontally (in the PIXEL grid).
To change setting, slide on the touchscreen or use the digipot control.

5.2.6 SUB PIXEL DELAY

Shifts the output signal in relation to the reference sync horizontally (in the SUB-PIXEL grid).
This function is of no significance internally, as clocks are processed together with data.
To change setting, slide on the touchscreen or use the digipot control.

5.2.7 R 2 – 3 DELAY

This delay setting only applies to external devices like MEGADEF, plugged in between Rack 2 and Rack 3. This setting compensates the delay caused by these external devices. The range is from 0 to 30 lines, the default setting for MEGADEF is 8 lines.

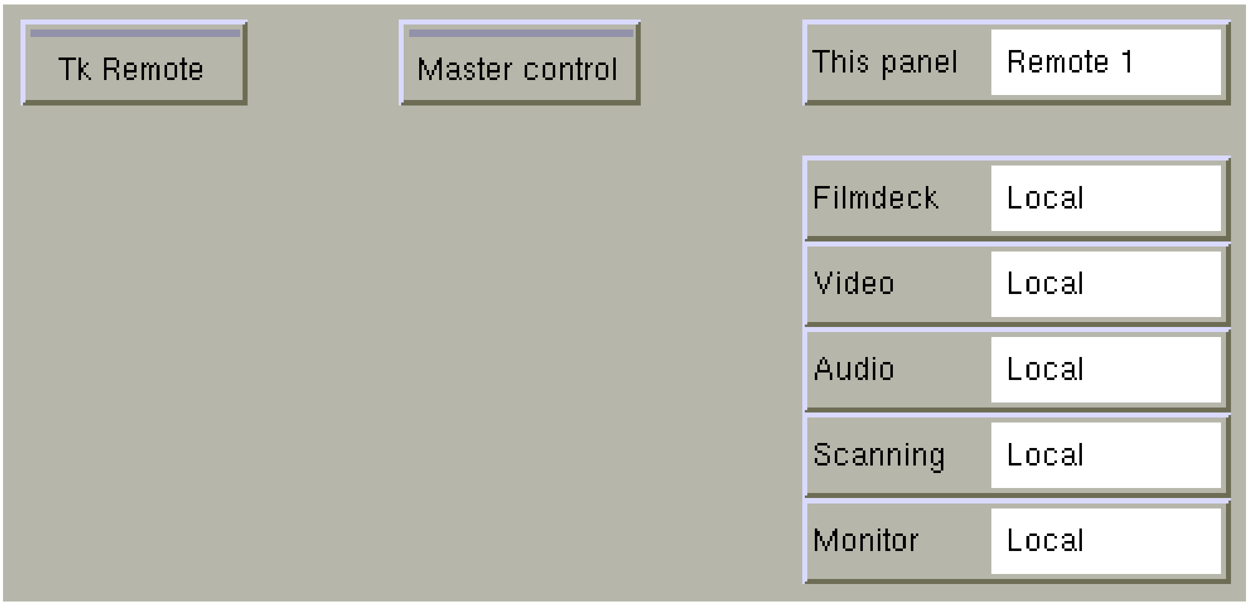
For more details see main menu “Special” / submenu “Scream”, chapter 5.22.

5.2.8 TIME CODE SET UP

This button opens the main menu “TK Config” / submenu “Time Code” as described in chapter 5.9.

5.3 MAIN MENU “HOME” / SUBMENU “REMOTE”

This menu offers a quick look at the remote status. It tells you which panel actually controls the telecine or parts of it and what you have to do to control the telecine via the GCP.



This panel Remote 1
Filmdeck Local
Video Local
Audio Local
Scanning Local
Monitor Local

Fig. 27: Main menu **“Home”** / submenu **“Remote”**

To control the telecine via the GCP (instead of controlling it via other panels) press the CRTL hard key on the left side of the panel. The hard key will then be lit. Only in case the doors of the telecine are open or the telecine is not yet in Standby it is not possible to switch over the control to the GCP.

The REMOTE key indicates whether the telecine is switched to ”Local” or ”Remote”.
A green bar on the key indicates Remote enabled. This key is only active in case the doors of the telecine are closed and the telecine is in Standby mode.

The MASTER CONTROL key has the same function as the CRTL hard key in case the TK Remote is enabled. In this case the control can be delegated to the GCP otherwise it has no function.

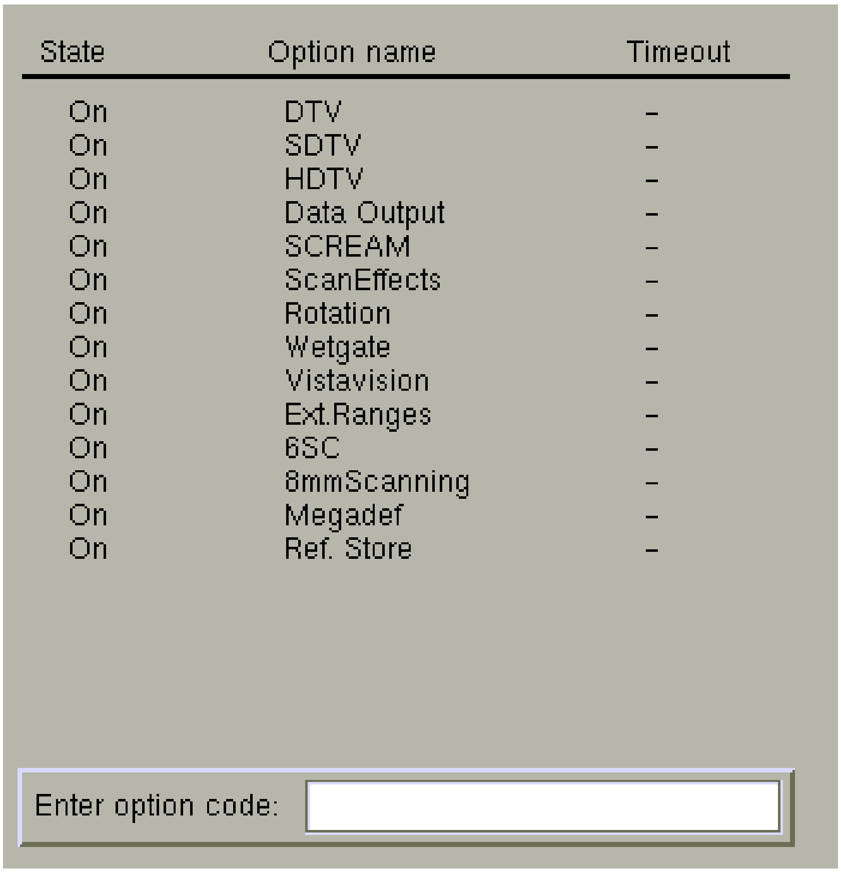
If the GCP controls the telecine (CTRL hardkey is lit) you can hand over the control to another panel by pressing once again the CTRL hardkey or the MASTER CONTROL key.

The third key (THIS PANEL) tells you which remote has to be enabled to control the telecine via the GCP, the default setting is Remote 2.

Underneath you find the different units of the telecine (Filmdeck, Video, Audio, Scanning and Monitor) which can be controlled via different Remotes. It is possible to click on the key and make a different choice from the drop down menu. This will delegate the respective control to another panel.
e drop down menu. This will delegate the respective control to another panel.

5.4 MAIN MENU “HOME” / SUBMENU “OPTIONS”

This menu shows the options of your DataCine/Telecine.



State	Option name	Timeout
On	DTV	–
On	SDTV	–
On	HDTV	–
On	Data Output	–
On	SCREAM	–
On	ScanEffects	–
On	Rotation	–
On	Wetgate	–
On	Vistavision	–
On	Ext.Ranges	–
On	6SC	–
On	8mmScanning	–
On	Megadef	–
On	Ref. Store	–

Enter option code:

Fig. 28: Main menu **“Home”** / submenu **“Options”**

The options window contains a list of all possible hardware options which are available for your system.

Every option has to be enabled once by typing in a certain code consisting of numbers and letters.

The moment you acquire a certain option (e.g. the 6SC) you will be given the corresponding license string by the manufacturer.

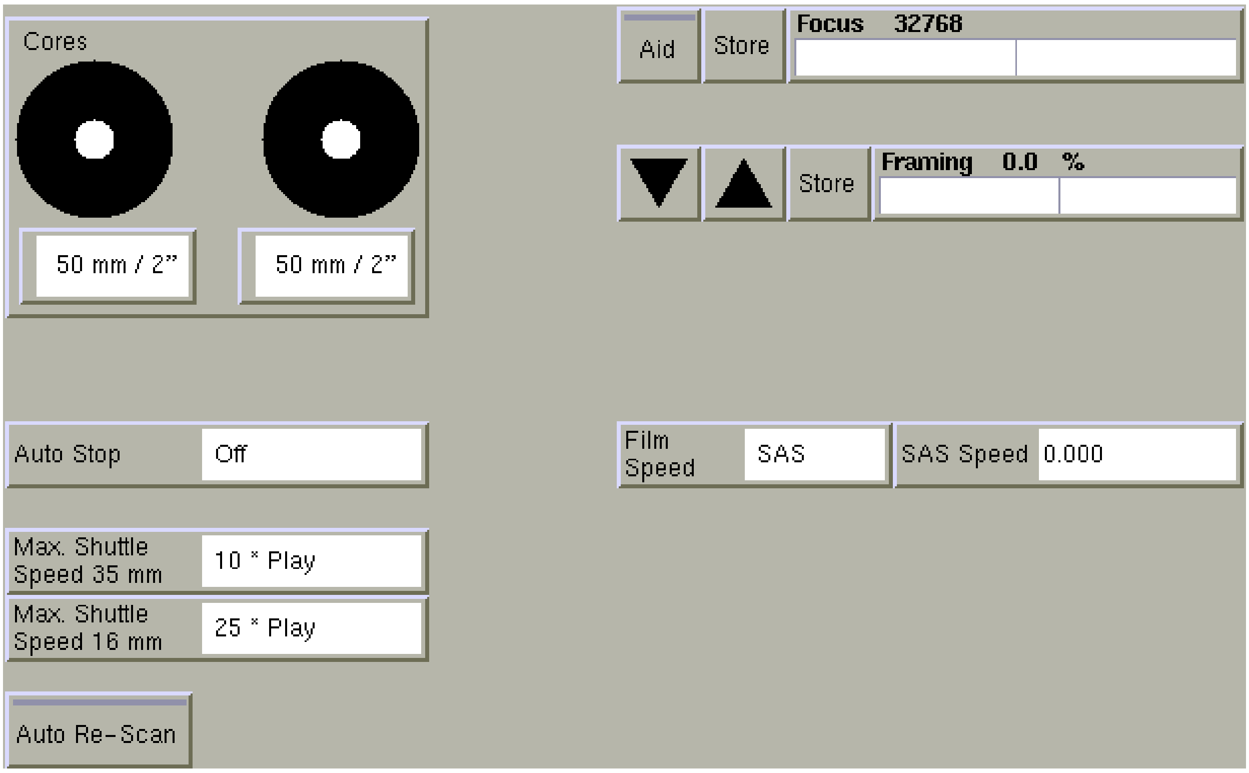
If you are not sure about some option and the use it will have in your facility, it is also possible to lend this certain option and to get the license string just for a short amount of time.

For this last–mentioned case there would be a date figuring in the third column of the options window.

To enter some option codes, click on the input window and a two–lined keyboard will be displayed on top of the menu. After typing in the code confirm by pressing the OK button.
Now you should see ”On” in front of the option.

5.5 MAIN MENU “TK CONFIG” / SUBMENU “FILM DECK”

This menu contains filmdeck settings.



50 mm / 2”

50 mm / 2”

Focus 32768

Framing 0.0 %

Auto Stop Off

Film Speed SAS

SAS Speed 0.000

Max. Shuttle Speed 35 mm 10 * Play

Max. Shuttle Speed 16 mm 25 * Play

Fig. 29: Main menu **“TK Config”** / submenu **“Film Deck”**

Core Diameter Window	**see 5.5.1**
Auto Stop	**see 5.5.2**
Max. Shuttle Speed	**see 5.5.3**
Auto Rescan	**see 5.5.4**
Focus	**see 5.5.5**
Framing	**see 5.5.6**
Film Speed	**see 5.5.7**

5.5.1 CORE DIAMETER WINDOW

Clicking on the buttons underneath the core symbols opens a drop down menu containing different core diameters. Select the size which matches the size of the cores you are using on the telecine. The diameters range from 50 to 150 mm in steps of one inch. The selected size is visible on the key display.

5.5.2 AUTO STOP

This function prevents the film from running off the core once arrived at the end of reel.
Auto stop can be enabled for PLAY and PLAY + SHUTTLE modes or it can be switched off.
Note that this function is only working right if the correct core diameter is set.

5.5.3 MAX. SHUTTLE SPEED

Maximum shuttle speed has to be chosen separately for 16mm and 35mm film.
Clicking on the buttons opens a drop down menu. For 35mm, max. shuttle speed from 2 times play speed up to 10 times play speed can be selected. For 16mm, max. shuttle speed ranges between 2 times and 25 times play speed. The selection is displayed on the key.

5.5.4 AUTO RESCAN

Some of the changes which can be applied to a picture cannot be seen without moving the film.
Illumination, focus, +6dB and film type changes are concerned. Auto Rescan can only be switched on or off. If enabled, it constantly moves the film two frames forward and back again.
If you hit the button again, Auto Rescan will be disabled.

5.5.5 FOCUS

The FOCUS SLIDER controls the focus servo in the telecine.
Focussing can be done either with the digipot control or by sliding on the touchscreen.
To make focussing easier, hit the AID button. This macro function sets zoom and contour to maximum and slows down the film speed to 6 frames per second. Thus, film grain will appear as large and clear as possible which helps to find the optimum focus position.
If the chosen value is very different from the unity setting, this should be saved as the new default. Hitting the STORE button opens a dialog window. With OK, your new setting will be stored and recalled next time when UNITY is pressed.

5.5.6 FRAMING

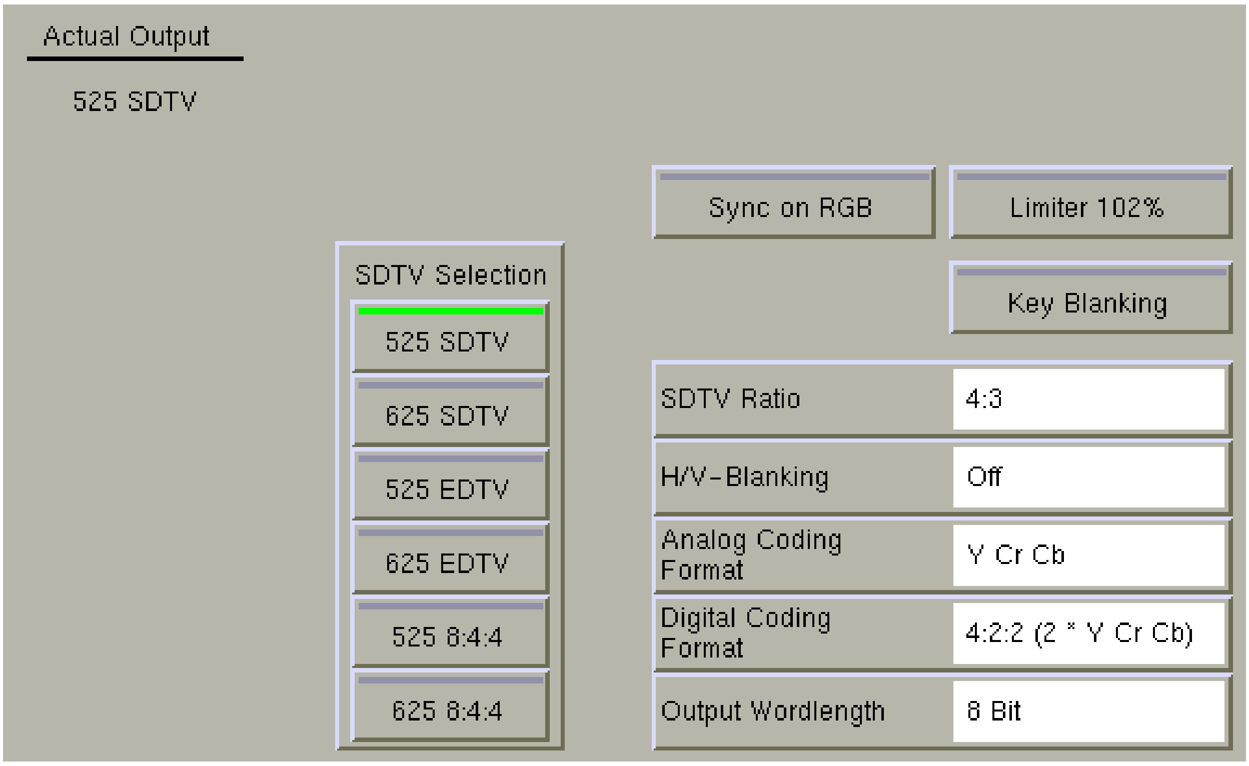
This function serves to achieve a correct vertical picture position.
The FRAMING COARSE buttons (arrows up and down) are only for 35mm film as they move the image one perforation hole up or down. (However, good working practice is to make sure that the frame bar of the film is laced up with the crossed lines on the sprocket wheel.)
The FRAMING FINE sliders allow neat vertical positioning for all film formats. This can be done either with the digipot control or by sliding on the touchscreen. Pressing the STORE button enables the current setting to be stored and recalled if you hit UNITY.

5.5.7 FILM SPEED

Film speed (frames per second) can be chosen as fixed speed or variable speed. Clicking the FILM SPEED button opens a drop down menu offering 6 fixed film speeds (depending on the respective standard) and SAS (Select A Speed). In case a variable speed is required, press SAS. Now the adjacent FILM SPEED button is active and the SAS dialog window opens.
Variable film speed can be altered in two ways either with the digipot control or by typing it in. Touching the area activates a numeric keyline on top of the screen. After typing in the desired speed, confirm by hitting OK on the bottom of the dialog. The current film speed is visible on the key display.

5.6 MAIN MENU “TK CONFIG” / SUBMENU “SDTV”

For SDTV output configuration.



Actual Output
525 SDTV

SDTV Ratio: 4:3
H/V-Blanking: Off
Analog Coding Format: Y Cr Cb
Digital Coding Format: 4:2:2 (2 * Y Cr Cb)
Output Wordlength: 8 Bit

Fig. 30: Main menu **“TK Config”** / submenu **“SDTV”**

Output Standard Window	**see 5.6.1**
SDTV Standard Selection Window	**see 5.6.2**
Video Output Settings (Multiple Keys)	**see 5.6.3**

5.6.1 OUTPUT STANDARD WINDOW

To have a quick look at the current output standard.

5.6.2 SDTV STANDARD SELECTION WINDOW

6 different SDTV standards are available (525Lines/60Hz, 625Lines/50Hz, 525EDTV, 625EDTV, 525 in 8:4:4 and 625 in 8:4:4). To select a certain standard, press the corresponding button. When it is active, the green line on the button is lit.

5.6.3 VIDEO OUTPUT SETTINGS (MULTIPLE KEYS)

Note that some of the following settings apply to analog or digital outputs (or both of them).

Sync on RGB: switches the sync in all three channels on or off (analog).

Limiter 102%: switches a limiter on or off, which limits the video output level at 102%.
Recommendable when working with analog VTRs e.g. Betacam SP (analog and digital).

Key Blanking: switches the key blanking on or off (digital).

H/V Blanking: The horizontal and vertical blanking can be switched off,
to standard norm and to narrow blanking (analog).

SDTV Ratio: selection between 4:3 or 16:9 scanning (analog and digital).

ANALOG CODING FORMAT: switches the analog output mode between RGB or Components (YCRCB).

DIGITAL CODING FORMAT: switches the digital output between the following modes: 4:2:2, 4:2:2:4, 4:4:4:4, and GBR/KBR.

4:2:2

Link A: Y,CR, CB	Luminance with halfband filtered chrominance
Link B: Y,CR, CB	Luminance with halfband filtered chrominance

4:2:2:4

Link A: Y,CR,CB	Luminance with halfband filtered chrominance
Link B: K, 0, 0	Key

4:4:4:4

Link A: Y, CR0, CB0	Luminance and even unfiltered chrominance
Link B: K, CR1, CB1	Key and odd unfiltered chrominance

GBR/KBR

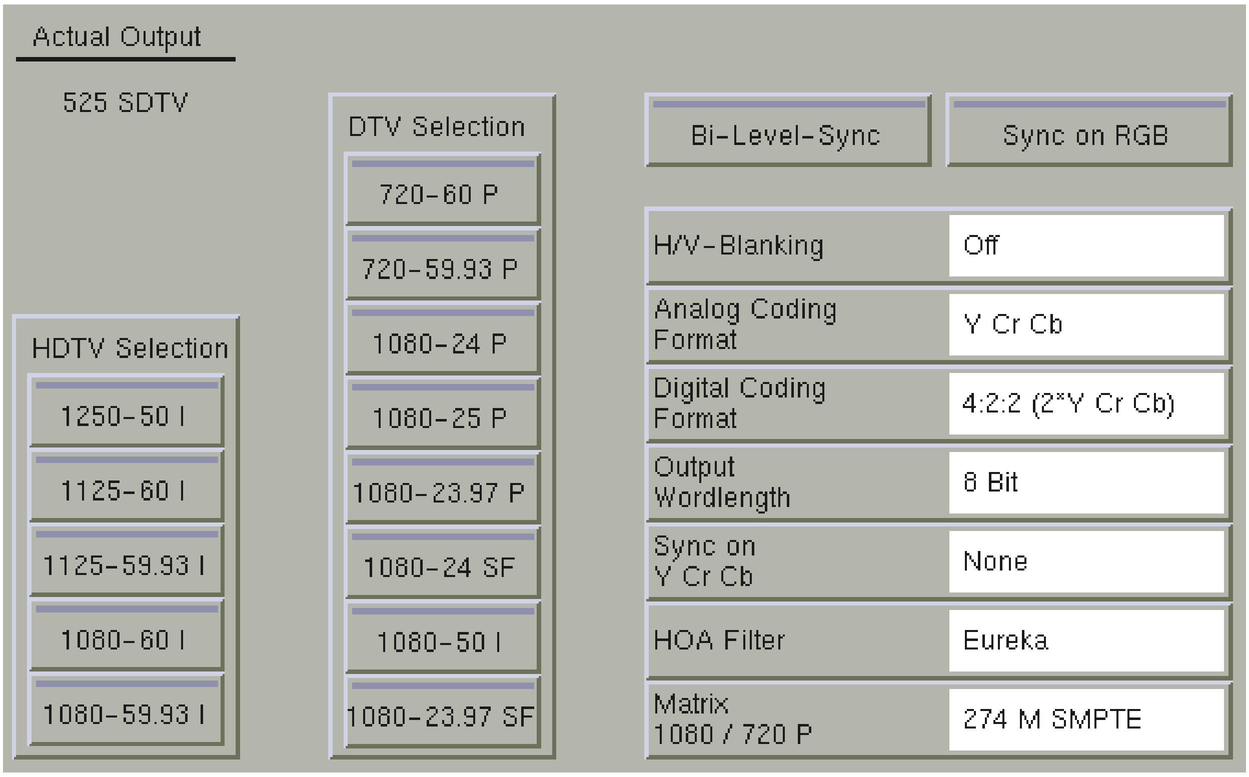
Link A: G, R0, B0	Green and even unfiltered blue and red
Link B: K, R1, B1	Key and odd unfiltered blue and red

OUTPUT WORDLENGTH: switches the digital output wordlength between 8bit and 10bit (digital).

All current settings are shown on the key display.

5.7 MAIN MENU “TK CONFIG” / SUBMENU “HDTV”

For HDTV output configuration.



Actual Output
525 SDTV

H/V-Blanking: Off
Analog Coding Format: Y Cr Cb
Digital Coding Format: 4:2:2 (2*Y Cr Cb)
Output Wordlength: 8 Bit
Sync on Y Cr Cb: None
HOA Filter: Eureka
Matrix 1080 / 720 P: 274 M SMPTE

Fig. 31: Main menu **“TK Config”** / submenu **“HDTV”**

Output Standard Window	**see 5.7.1**
HDTV Standard Selection Window	**see 5.7.2**
DTV Standard Selection Window	**see 5.7.3**
Video Output Settings (Multiple Keys)	**see 5.7.4**

5.7.1 OUTPUT STANDARD WINDOW

To have a quick look at the current output standard.

5.7.2 HDTV STANDARD SELECTION WINDOW

5 different HDTV standards are available (1250_50, 1125_60, 1125_59.93, 1080_60, 1080_59.93). To select a certain standard, press the corresponding button. When it is active, the green line on the button is lit.

5.7.3 DTV STANDARD SELECTION WINDOW

8 different DTV standards are available (720_60, 720_59.93, 1080_24p, 1080_25p, 1080_23.97p, 1080_24sF, 1080_50i and 1080_23,97). To select a certain standard, press the corresponding button. When it is active, the green line on the button is lit.

5.7.4 VIDEO OUTPUT SETTINGS (MULTIPLE KEYS)

BI LEVEL SYNC: This function switches analog syncs between BI LEVEL and TRI LEVEL.

SYNC ON RGB: switches the sync signal in all three channels on or off (analog).

H/V Blanking: The horizontal and vertical blanking can be switched off, to standard norm and to narrow blanking (analog).

ANALOG CODING FORMAT: switches the analog output mode between RGB or Components (YCRCB).

DIGITAL CODING FORMAT: switches the digital output between the following modes: 4:2:2, 4:2:2:4, 4:4:4:4, GBR/KBR and GRKB.

4:2:2

Link A: Y,CR,CB	Luminance with halfband filtered chrominance
Link B: Y, CR,CB	Luminance with halfband filtered chrominance

4:2:2:4

Link A: Y, CR,CB	Luminance with halfband filtered chrominance
Link B: K, 0, 0	Key

4:4:4:4

Link A: Y, CR0, CB0	Luminance and even unfiltered chrominance
Link B: K, CR1, CB1	Key and odd unfiltered chrominance

GBR/KBR

Link A: G, R0, B0	Green and even unfiltered blue and red
Link B: K, R1, B1	Key and odd unfiltered blue and red

GRKB

Link A: G0, G1, G2,G3,.../ R0, R1, R2,R3,... all green and then all red signals
Link B: K0, K1, K2, K3,.../ B0, B1, B2, B3,... all key and then all blue signals

OUTPUT WORDLENGTH: switches the digital output wordlength between 8bit and 10bit (digital).

SYNC on YCRCB: switches the sync signal in the YCRCB signal.

The following modes are possible:
NONE: no sync is inserted.
Y: Sync is only inserted in the Y signal.
STANDARD: in 1250 standards, sync is only inserted in Y signal, in 1080 standards, sync is inserted in every channel.
ALL: sync is inserted in every channel of the YCRCB signal.

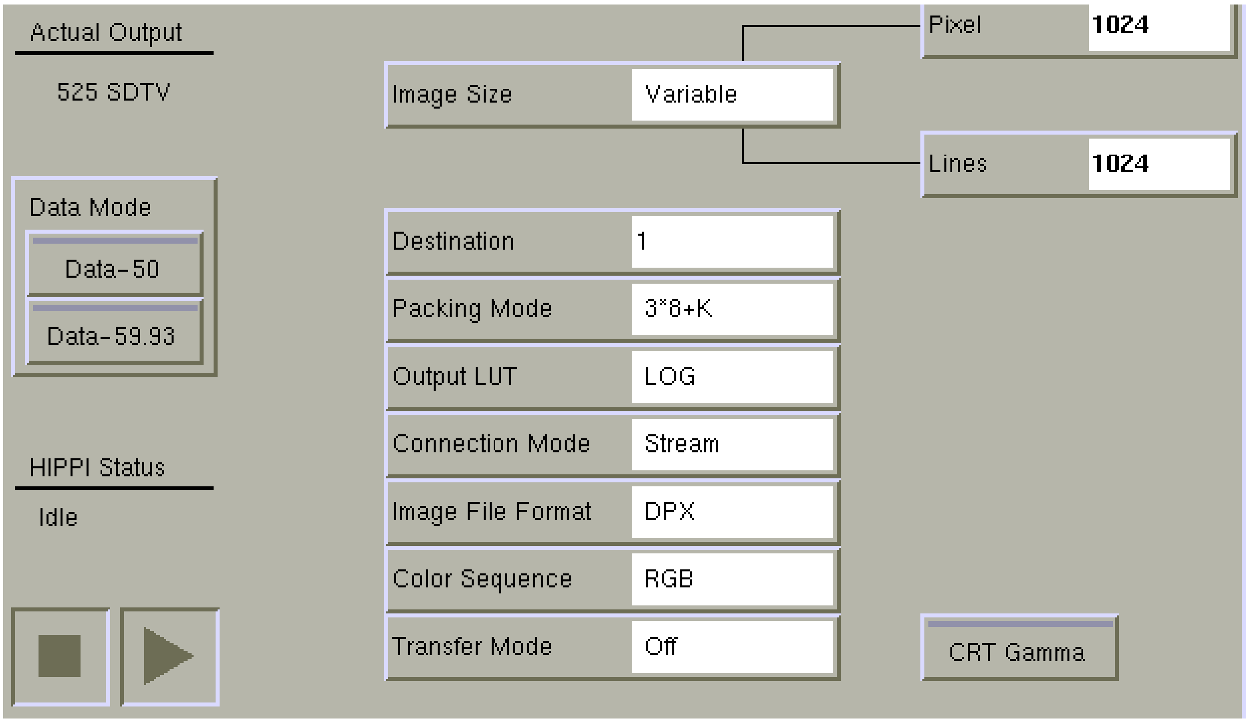
HOA–FILTER (analog):
The following selection can be made: AUTO, EUREKA and FULL BANDWIDTH.
AUTO: activates the EUREKA filter when the analog HDTV output formats 1250, 1125, 1080 are selected, for other formats no filter is applied.
EUREKA: The Eureka filter is active in all analog HDTV modes.
FULL BANDWIDTH: The filter is bypassed in all analog HDTV modes.

MATRIX: RGB to YCRCB matrix coefficients for some DTV/HDTV standards can be switched between SMPTE 240M and SMPTE 274/296M standard.

All current settings are shown on the respective key displays.

5.8 MAIN MENU “TK CONFIG” / SUBMENU “DATA”

This menu contains Data–Mode information.



Actual Output
525 SDTV

Image Size: Variable
Pixel: 1024
Lines: 1024

Destination: 1
Packing Mode: 3*8+K
Output LUT: LOG
Connection Mode: Stream
Image File Format: DPX
Color Sequence: RGB
Transfer Mode: Off

HIPPI Status
Idle

Fig. 32: Main menu **“TK Config”** / submenu **“Data”**

Standard Output Window	**see 5.8.1**
Data Mode Buttons (50/60 Hz Timecode Base)	**see 5.8.2**
HiPPI Status Window	**see 5.8.3**
Start / Stop Buttons	**see 5.8.4**
Image Size Input Area	**see 5.8.5**
Data Transfer Setup Buttons	**see 5.8.6**
CRT Button	**see 5.8.7**

5.8.1 STANDARD OUTPUT WINDOW

To have a quick look at the current output standard.

5.8.2 DATA MODE BUTTONS (50/60 HZ TIMECODE BASE)

These buttons enable Data mode.
In Data mode, frames are transferred regardless of any Video standard.
The 50/60Hz selection is relevant for frame count to Timecode conversion.
In 50Hz mode the conversion is based on 25 fps, 60Hz mode to 24 fps.
This function is helpful when data transfer is prepared in video standard.

Note: When Data mode is active your picture monitor is switched to black!

5.8.3 HIPPI STATUS WINDOW

The Data transfer happens via a HiPPI (High Performance Parallel Interface) channel.
Have a look here to see the status of the HiPPI channel. 5 different messages can be displayed:

”not connected”:	connection to external unit could not be established
”connected”:	connected to external unit
”idle”:	no Data transferred on HiPPI channel
”transmitting”:	Data is transferred on the HiPPI channel
”failure”:	something went wrong during transfer

5.8.4 START / STOP BUTTONS

Note: This button only applies to transfer mode FRAME BY FRAME.

Once everything is setup for data transfer, switch the telecine to Play using the hard key on the transport keypad, wait until the capstan has locked (the timecode icon turns from yellow to gray) and start the data transfer by pressing the START button on the touchscreen.
To stop the transfer, hit the STOP button on the touchscreen.

5.8.5 IMAGE SIZE INPUT AREA

This function is for fixed formatting: Click on the IMAGE SIZE key and make your choice from the drop–down menu.

The following standards are selectable:
4:3 SDTV, 16.9 SDTV, 16:9 HDTV, Variable, Equal to Input.

Choose VARIABLE to modify horizontal and vertical resolution. The adjacent key PIXEL determines the number of pixels in one line (horizontal resolution), LINES determines the number of lines in one frame (vertical resolution).

There are two ways to modify these values either by turning the digipot controls next to the keys or by typing it in. Clicking on the key activates a numeric keyline on top of the screen. After typing in the desired values confirm by hitting OK on the bottom of the dialog.

The actual size is shown on the key display.

5.8.6 DATA TRANSFER SETUP BUTTONS

Destination:

Selects where the data stream is send to. The destination only has to be assigned if the HiPPI is connected to a switch. There is no need to define a destination if you have a direct connection: Source – HiPPI – Drain.

Packing Mode:

Combines data words of different video components (such as Y, RGB, K) to data sequences to transfer them with a certain data rate via the HiPPI data channel.
There are 6 different modes selectable:
3x8+K, 3x10 bit, 4x16 bit, 3xY–only(10bit), 2xY–only(16bit), 3xK–only(10bit).
Click on the button and make your choice from the drop–down menu.
The current mode is shown on the key display.

Output LUT:

This function maps image data to level ranges according to the selected LUT (Look Up Table).
Depending on the particular application, a certain LUT has to be chosen.
8 different tables are selectable, they split up in two main groups:
”standard”, (TVLEV, GRLEV, DXR, TV_PD and LOG) and
”Genesis”, the Kodak scanner emulation (DRX–G, TV–G, C–PD).

Note that depending on the chosen Look Up Table CRT Gamma is automatically switched off!

Connection Mode:

The HiPPI channel can operate in DATAGRAM mode or in STREAM mode.
DATAGRAM mode: HiPPI data connection will be established, one frame will be transferred, afterwards the connection is separated again and so on.
STREAM mode: HiPPI data connection will be established, frames are transferred and the connection will be separated only in case a problem occurs, you switch to video mode or you change the destination.
For normal working practice it is unimportant which mode is selected. Only in former times some external hardware did not support Stream mode.

Image File Format:

Each frame is a single data file. Two formats can be selected: DPX and TIFF.
DPX stands for Digital moving Picture eXchange, this is the commonly used format and there are no restrictions for the use of it.
TIFF stands for Tag Image File Format and can only be used with 3x8+K or 3x16+K packing mode.

Color Sequence:

Defines the sequence of the digital video components in the 32bit HiPPI word.
Two selections are possible: RGB and GBR.

Transfer Mode:

Defines the transfer mode. Depending on the application you might want to change this mode.
4 different modes are selectable:

Off: Data transfer is switched off.

Frame by frame: application: transfer and storage of complete sequences. Frames are only transferred in locked play mode. In locked play data transfer is activated with START button.
If any frames are skipped the transfer will be aborted.
This mode makes sure that in the end there is no frame missing.

Display changed mode: Data is only transferred if frame number or picture content are changing.
This does not imply a running telecine, a change in color grading is enough.
Frames can be skipped in this mode without aborting the transfer.

Continuous: Data is continuously transferred no matter if the film/telecine is running or not.
Therefore this mode is suitable for test purposes (e.g. Test Patterns).

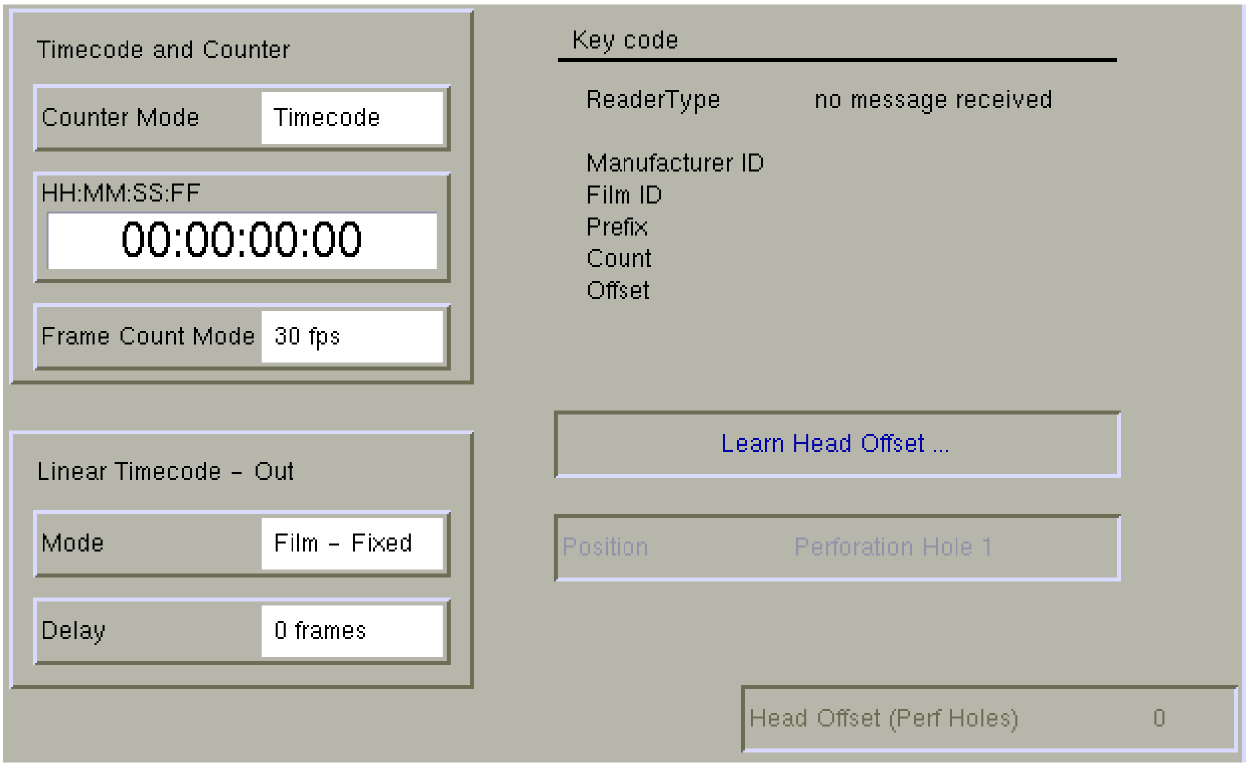
5.8.7 CRT BUTTON

CRT is a gamma function to compensate the gamma of a picture monitor. In order to judge a picture content (in terms of gradation) by looking at a monitor, CRT has to be switched on.
When working with Data, the end product is not necessarily video or a TV picture but a picture recorded back on film or a picture which will be projected by a beamer. In this case a LUT will be chosen that replaces the CRT gamma by its own characteristic.
Depending on the selected look up table CRT GAMMA will automatically be switched on or off.
(CRT GAMMA in Data mode is only active with TVLEV and GRLEV.)
When CRT Gamma is active the green bar on the button is lit.

Note that for Data mode applications, the speed of the telecine has to be reduced. 2 – 8 frames per second is the possible range of speed during a 2K transfer, depending on the resolution. The HiPPI channel can not handle more than 100MB a second.

5.9 MAIN MENU “TK CONFIG” / SUBMENU “TIMECODE”

This menu contains timecode and keycode setup information.



Timecode and Counter

Counter Mode: Timecode

HH:MM:SS:FF: 00:00:00:00

Frame Count Mode: 30 fps

Linear Timecode - Out

Mode: Film - Fixed

Delay: 0 frames

Key code

ReaderType: no message received

Manufacturer ID
Film ID
Prefix
Count
Offset

Position: Perforation Hole 1

Head Offset (Perf Holes): 0

Fig. 33: Main menu **“TK Config”** / submenu **“Timecode”**

Timecode and Counter Window	**see 5.9.1**
Linear Timecode-Out Window	**see 5.9.2**
Key Code Windows	**see 5.9.3**

5.9.1 TIMECODE AND COUNTER WINDOW

The upper line shows the COUNTER MODE in which the telecine is currently counting.
Three different modes are selectable: Timecode, Frames, Feet & Frames. To change this mode, click on the key and make your choice from the drop–down menu.

The display shows the current COUNTER POSITION of the telecine.

The lower line shows the FRAME COUNT MODE depending on the output standard.
To modify, click on the key and make your choice from the drop–down menu.

The following frame count modes are selectable:
24 frames: for 24 frames/sec and 60 or 59.94Hz video systems
25 frames: for 25 frames/sec and 50Hz video systems
30 frames: for 30 frames/sec and 60Hz video systems
30 comp.*: for 24 frames/sec and 60 or 59.94Hz video systems

* Note: 30 comp. = 30 frames compensated

In 24 fps mode, the frames are numbered from 0 to 29, but every fifth digit is dropped:
0, 1, 2, 3, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 18, 20, 21, 22, 23, 25, 26, 27, 28,
0, 1, 2,....

5.9.2 LINEAR TIMECODE-OUT WINDOW

LINEAR TIMECODE should not be mixed up with LTC, Longitudinal Timecode generated in a VTR. One possible application of this feature is the synchronization of external devices, such as DAT or Sepmag Players, it can also be used to feed the external Timecode In of the Recorder VTR or the Phantom Transfer Engine for HD transfers into the SGI HD Input/Output board.

With the upper key, LINEAR TIMECODE MODE settings can be made. The current mode is displayed on the key.
Three different modes are selectable: Film Fixed, TV–TC Gen and Film Variable. To change this mode, click on the key and make your choice from the drop–down menu.
TV–TCGEN is used when the timecode output of the telecine is connected to the timecode input of the VTR. For every video frame a unique timecode value is generated.
FILM–FIXED operates alike but in this case for every film frame a unique timecode value will be generated.
In FILM VARIABLE mode, the LINEAR TIMECODE frequency is variable in the range from 12 to 57 frames per second.

The lower key shows the current delay.

Different settings are needed in order to match the LINEAR TIMECODE timing with delays introduced by external devices. The possible selection ranges from 0 to 3 frames. ”0” means no delay active.

To change, click on the key and make your choice from the drop–down menu.

Note that the telecine has to be in STOP mode.
This function is important for transfers into the SGI HDio board.

5.9.3 KEYCODE WINDOW

This window shows information about the connected keycode reader and the detected keycode.
Note, that keycode information is only displayed if the keycode reader is installed and if keycode information is on the film.

5.9.4 LEARN HEAD OFFSET

This function is a comfortable method to adjust the keycode reader head offset to match the film frame to the corresponding keycode. To start with, mark a reference frame on the film and note the respective keycode (count) printed on the film edge and the offset which is the number of frames between the keycode and the marked frame.
Park the film at the reference frame (film gate position).
Open the LEARN HEAD OFFSET window by clicking on the key.
Now enter the keycode (count and offset) of your reference film frame.
Clicking on the input area opens a numeric keyline on top of the menu.
Type in the values and confirm by pressing the OK button.
Click on the POSITION key in order to determine the perforation hole on which the keycode dot is positioned. Make your choice from the drop–down menu.
(For 16mm film it is always Perforation Hole 1)
Now hit the START button and rewind a short piece of film.
Then play your material, be sure that it includes your reference frame.
Take care that at least one keycode is read during this transfer.
If the telecine has learned the head offset successfully, it will stop the procedure automatically.
The green bar on the STOP button will then be lit and the learn head offset window is closed.
If an error occurs during the learning procedure, a warning message will be displayed. Then you have to retry the whole procedure.

5.9.5 CHECK KEYCODE

Play a short piece of film and take care that any keycode is read on the reader device and compare the keycode of the currently scanned frame with the displayed code (count & offset) in the keycode window.
If keycode ”count” and ”offset” do not match to the right frame, please check that the keycode position (reference dot) and ”head offset” are properly adjusted.
If the keycode position (reference dot position) changes during a transfer with a fixed speed, the system automatically adjusts the new position.

5.9.6 KEYCODE IN DATA

Keycode is only available in the DPX Data format.

Keycode can only be evaluated if the capstan servo is locked. (TC display turns to gray.)

If the keycode position (reference dot position) changes during a transfer with a fixed speed (due to splices or transitions between film reels), the system automatically adjusts the new position.

Note for EVERTZ Keycode Reader!
This works only, if at least one keycode before the position change and one keycode after the change are read with the same speed and play direction.

The reader type is automatically adjusted after the reader has read and transferred any key code to the telecine.
For additional keycode information see www.kodak.com.

5.9.7 POSITION

This function determines which perforation hole is the reference mark in relation to the film frame. For 35mm/4perf, perforation holes 1 – 4 can be determined in relation to the 4 perforation holes per film frame. (For 16mm films it is always perf 1 as there exists only one perforation hole per frame.)

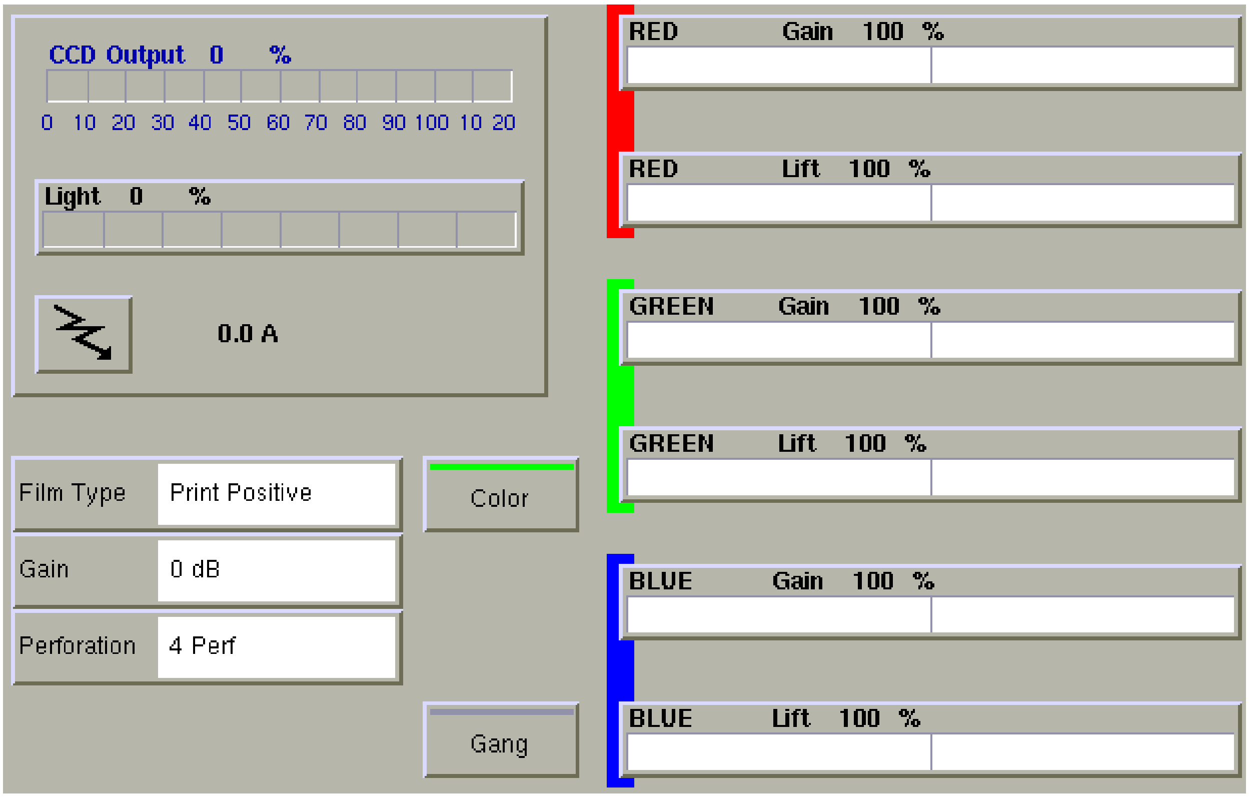
To modify POSITION, click on the key and make your choice from the drop–down menu.
This function is locked by default.

5.9.8 HEAD OFFSET

Head offset specifies the distance between the film scanner and the keycode reader head in perforation holes. The selection ranges from 0 – 99.
The LEARN HEAD OFFSET function is a comfortable method to adjust this setting.
The current offset is shown on the key display.
To modify the head offset, click on the key. This opens a numeric keyline on top of the menu. Type in the value, confirm by pressing OK or turn the corresponding digipot until the required value is reached.

5.10 MAIN MENU “FILM” / SUBMENU “MATCHING”

This menu contains the basic film setting.



CCD Output 0 %

Light 0 %

0.0 A

Film Type: Print Positive

Gain: 0 dB

Perforation: 4 Perf

RED Gain 100 %

RED Lift 100 %

GREEN Gain 100 %

GREEN Lift 100 %

BLUE Gain 100 %

BLUE Lift 100 %

Fig. 34: Main menu **“Film”** / submenu **“Matching”** (Spirit version)

Illumination Window: **CCD Output Level, Light, Flash, Lamp Current**	**see 5.10.1**
Film Type Selection	**see 5.10.2**
0db/+6db Gain Button	**see 5.10.3**
Perforation Button	**see 5.10.4**
Color/Mono Button	**see 5.10.5**
Negative Matching	**see 5.10.6**
Gang Button	**see 5.10.7**

5.10.1 ILLUMINATION WINDOW: LIGHT

CCD Output is the signal level derived from the scanner head. This is set using LIGHT which is the illumination or light level of the film. The aim is to achieve that sufficient light is available to capture D–Min (minimum density) of the negative or D–Max (maximum density) on a Print.

The CCD Output level should be around 85%.

A good adjustment of the light intensity avoids stronger amplification in the signal processing later on, which of course improves the signal–to–noise ratio.

To adjust illumination, click on the area (gets highlighted when activated). By moving the trackball or by sliding on the touchscreen, the amount of light falling via the film on the CCDs can be controlled.

Instead of using the trackball you can also turn the digipot control in Menu Home/ Overview.

During adjustment watch the CCD OUTPUT LEVEL DISPLAY ! Make sure that this level is around 85%. With levels beyond 50% you will loose quantization steps, levels above 100% will be clipped.

What happens physically when the amount of light is increased?

Spirit: Firstly the aperture opens, once full aperture is reached and still more light is needed, the current of the Xenon lamp goes up. The range of the aperture covers 7 lens stops.

Shadow: The light intensity is controlled by a gray scale disc which is moved by a servo when turning up or down the light level.

Note that the telecine has to be in PLAY mode during illumination adjustment. If the settings are modified while the telecine is in STOP mode, changes will not be visible unless you switch to PLAY or STEP. Or else activate AUTO RESCAN (Menu TK Config/Filmdeck).

Changes in light level from one scene to the next require AUTO PRESET mode (Pandora Pogle) when transferring a program on tape. Changes of approximately 3 lens stops can be executed in the period of one frame; if the changes are bigger, this will be visible in the recording!

5.10.1.1 Illumination Window: CCD Output

Displays the signal level coming from the CCDs as a result of the adjusted illumination and the film density.
You should always have an eye on it. Ideally it should be around 85%.

5.10.1.2 Illumination Window: Flash Button

The FLASH button sets the illumination intensity at once to maximum CCD output level. You may have to push it a few times and the telecine has to be in Play mode. This button is rather used for test purposes.

5.10.1.3 Lamp Current display (only Spirit)

Have a look at the lamp current display from time to time.
The maximum lamp current is 25 amps, but normally it should not exceed 21 amps to achieve 85% CCD output level. Higher current values are an indication of an aging lamp. Note that high lamp currents used over a longer period shorten the lifetime of the lamp.

5.10.2 FILM TYPE

This selection controls the filter wheel servo.

Spirit filter wheel provides: Positive, Negative, Interpositive and Primetime.

Shadow filter wheel provides: a hole for Positive, Negative, Interpositive and Primetime.

Different filter types are available to achieve optical pre–matching for the respective film material.

Click on the button and make your choice from the drop–down menu. For each filter type, positive and negative setting is available. This function also switches the gamma according to the selected film type.

The current setting is shown on the key display.

5.10.3 0DB/+6DB GAIN BUTTON

When working with very dense film material, e.g. print or black & white negative, switch to +6db, otherwise you should get along with 0db.

5.10.4 PERFORATION BUTTON

This function should be switched according to the picture height (in perforation holes) on the film.

For Super8mm and 16mm there exits no choice as there is only one perforation hole related to one film frame. For 35mm, different settings are possible depending on the production format.

E.g. Technorama: 2 perf
Normal 35/Cinemascope: 4 perf
35mm for 16/9: 3 perf
Cinerama: 6 perf
Vistavision: 8 perf
(The picture is rotated through 90° in relation to the other formats)

5.10.5 COLOR/MONO BUTTON

This button serves to switch between colored and black & white (Y) reproduction.

In case you are working with black & white material and you want to avoid accidental tints, switch to MONO. With MONO enabled, only the Y signal will be processed. Of course you can also apply this function to colored film material to achieve a special effect.

5.10.6 NEGATIVE MATCHING

These controls serve to set the RGB black level (Lift) and the RGB white level (Gain).
The adjustments can be done either with the corresponding digipot controls or by sliding on the touchscreen. First adjust RGB Gain (stretches the signal) and then RGB Lift (positions the signal). It is necessary to watch the RGB signals on an oscilloscope. Monitoring point: ”gain/lift”.

Make sure to be in the range of 0 to 70mV to avoid any clipping of the signals.

Note that detail information in clipped signal parts is lost for further processing.

5.10.7 GANG

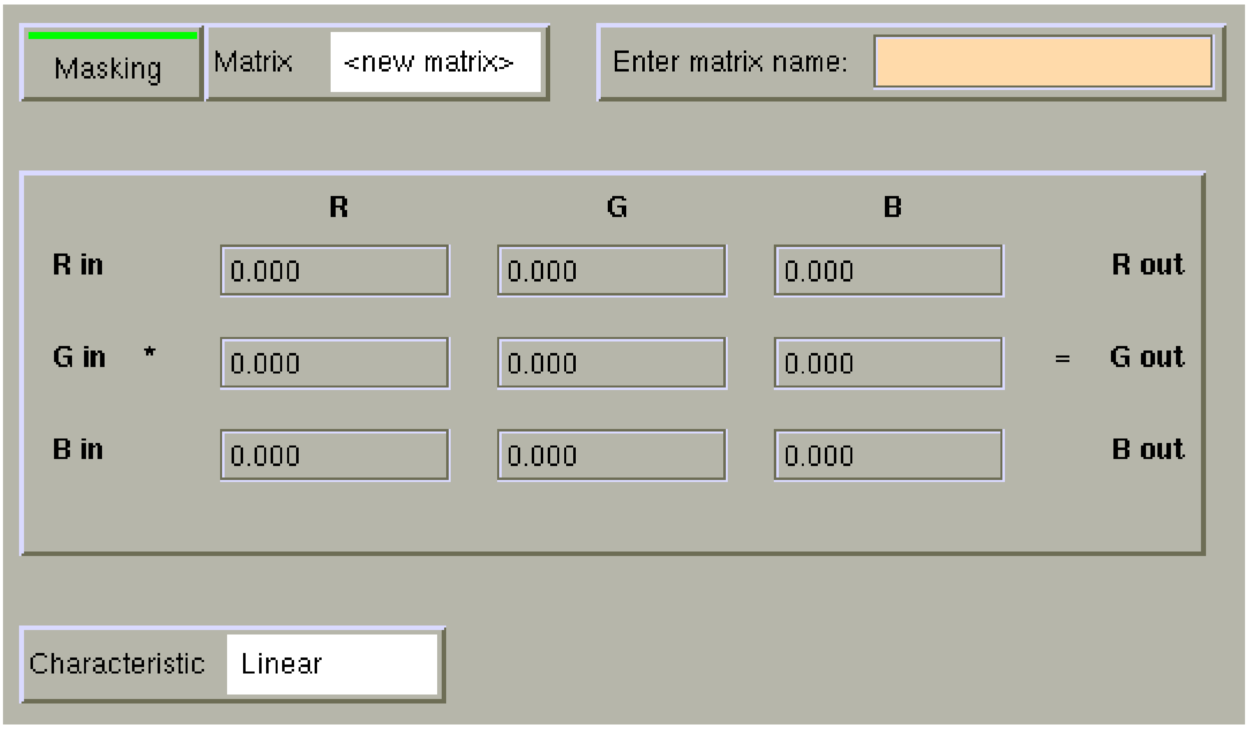
This button has the function to concertedly control a group of keys.
With GANG activated (green bar on the key is lit), the lift/gain of all three channels (R,G, B) is modified by touching only one of the controls.

5.11 MAIN MENU “FILM” / SUBMENU “MASKING”

This menu provides tools for specific color adaption for different film types.

Manufacturers of film stocks use different dyes which require different masks to compensate for spurious color densities (crosstalk) between the 3 dye layers. (That is the reason for the orange mask of Negative film material.)
For a quick matching of different characteristics it can be very helpful to recall specific settings.

The color adaption is done by coefficients which are integrated in a 3x3 matrix. There is a set of fixed maskings and variable settings to be modified and stored as new MASKING MEMS.



Matrix <new matrix>

Enter matrix name:

		R	G	B		
R in		0.000	0.000	0.000		R out
G in	*	0.000	0.000	0.000	=	G out
B in		0.000	0.000	0.000		B out

Characteristic Linear

Fig. 35: Main menu **“Film”** / submenu **“Masking”**

Masking Button	**see 5.11.1**
Masking Mems	**see 5.11.2**
RGB Matrix Coefficients Window	**see 5.11.3**
Characteristic (Lin/Log)	**see 5.11.4**

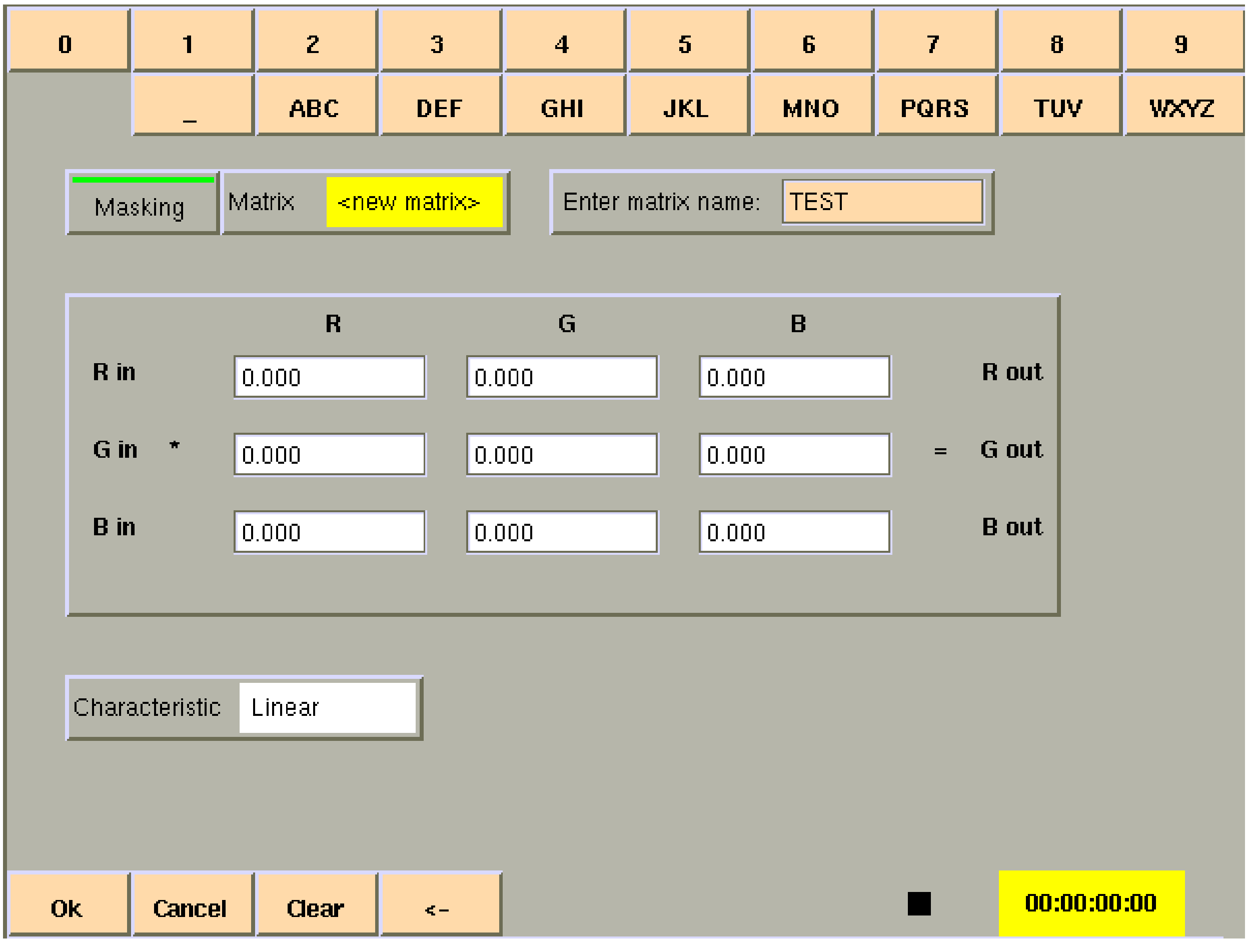
5.11.1 MASKING BUTTON

Click on the button to activate the masking function. (If the green bar on the button is not lit, masking is bypassed.)

5.11.2 MASKING MEMS

Click on the Matrix button to open the drop-down menu. Various fixed sets of coefficients are available.
The current selection is displayed on the button. The corresponding coefficients are shown in the matrix window.

If you need something else, enter your own settings. For this purpose click on <new matrix>. An additional window ”Enter matrix name” opens and a two-lined keypad is activated on top of the menu.



Matrix <new matrix>

Enter matrix name: TEST

	R	G	B	
R in	0.000	0.000	0.000	R out
G in *	0.000	0.000	0.000	= G out
B in	0.000	0.000	0.000	B out

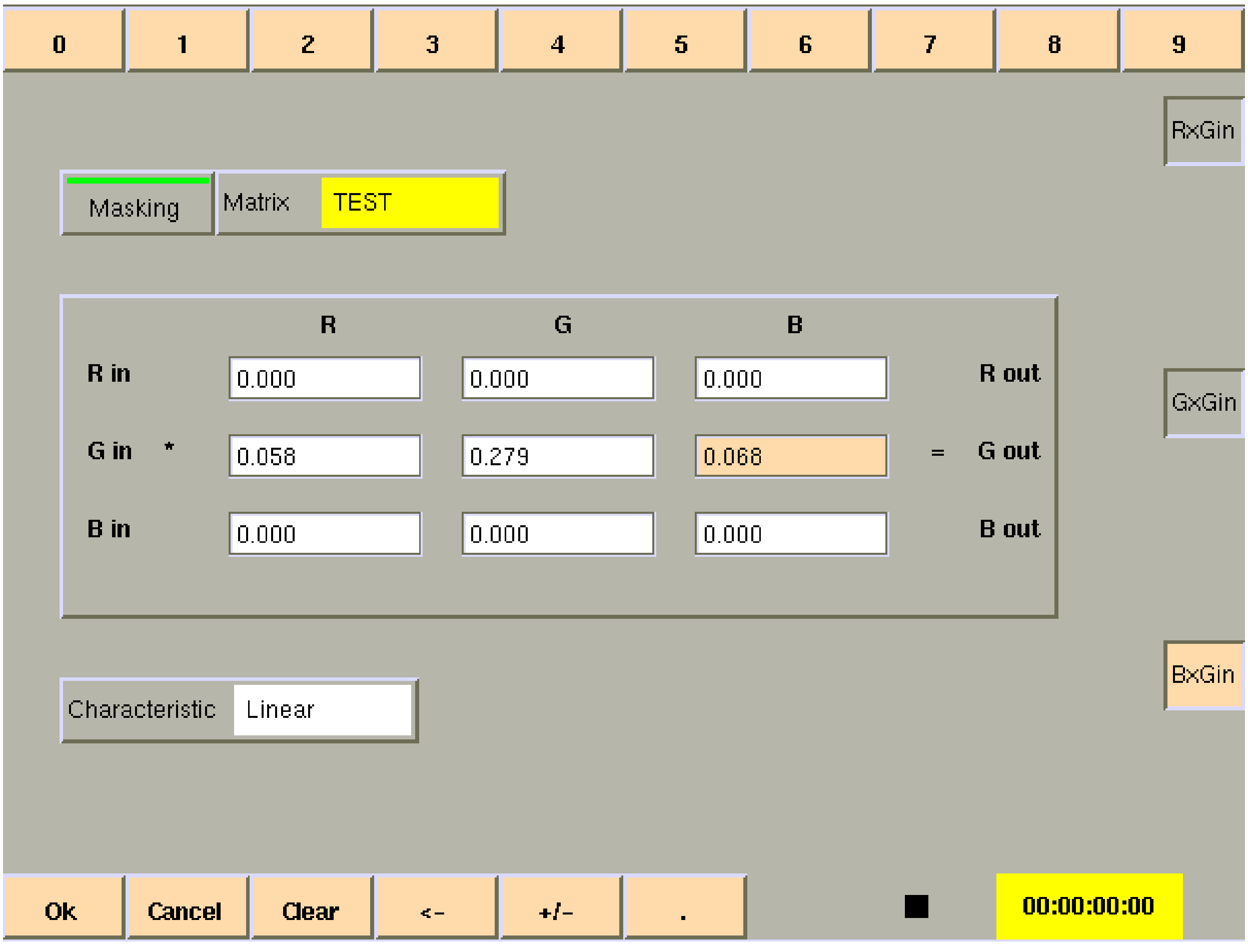
Characteristic Linear

00:00:00:00

Fig. 36: Main menu **“Film”** / submenu **“Masking”** with opened window **“Enter matrix name”** and activated **keypad**

Type in the name for the new matrix, confirm by pressing the Ok button at the bottom of the dialog. Now the coefficients in the matrix window can be modified.

Clicking on the coefficients opens a numeric keypad on top of the menu, type in your modified values.
Alternatively the digipots can be used to adjust the matrix coefficients of the selected row.
Confirm by pressing Ok.



Masking

Matrix TEST

	R	G	B		
R in	0.000	0.000	0.000		R out
G in *	0.058	0.279	0.068	=	G out
B in	0.000	0.000	0.000		B out

Characteristic Linear

00:00:00:00

Fig. 37: Main menu **“Film”** / submenu **“Masking”** with activated **keypad** to type new matrix coefficients

From this moment on your new coefficients figure in the masking selection.

Matrixes entered by the customer can be deleted. Select the matrix you want to delete, click again the Matrix button and then hit delete matrix. A popup window opens asking you ”Do you really want to delete matrix ...?”. Hit Ok to delete the current user defined matrix, the button display changes to ”undefined”.

5.11.3 RGB MATRIX COEFFICIENTS WINDOW

This window displays the coefficients of the currently selected Masking.
The RGB out values are calculated by the coefficients of the matrix.
The result as you can judge from the picture varies depending on the current selection.

5.11.4 CHARACTERISTIC (LIN/LOG)

Mode LIN is mainly used with Print material (projection-related correction).
Mode LOG is used with OCN film material (scene-related correction).

5.12 MAIN MENU “COLOR” / SUBMENU “PRIMARY”

This menu provides primary color grading functions.

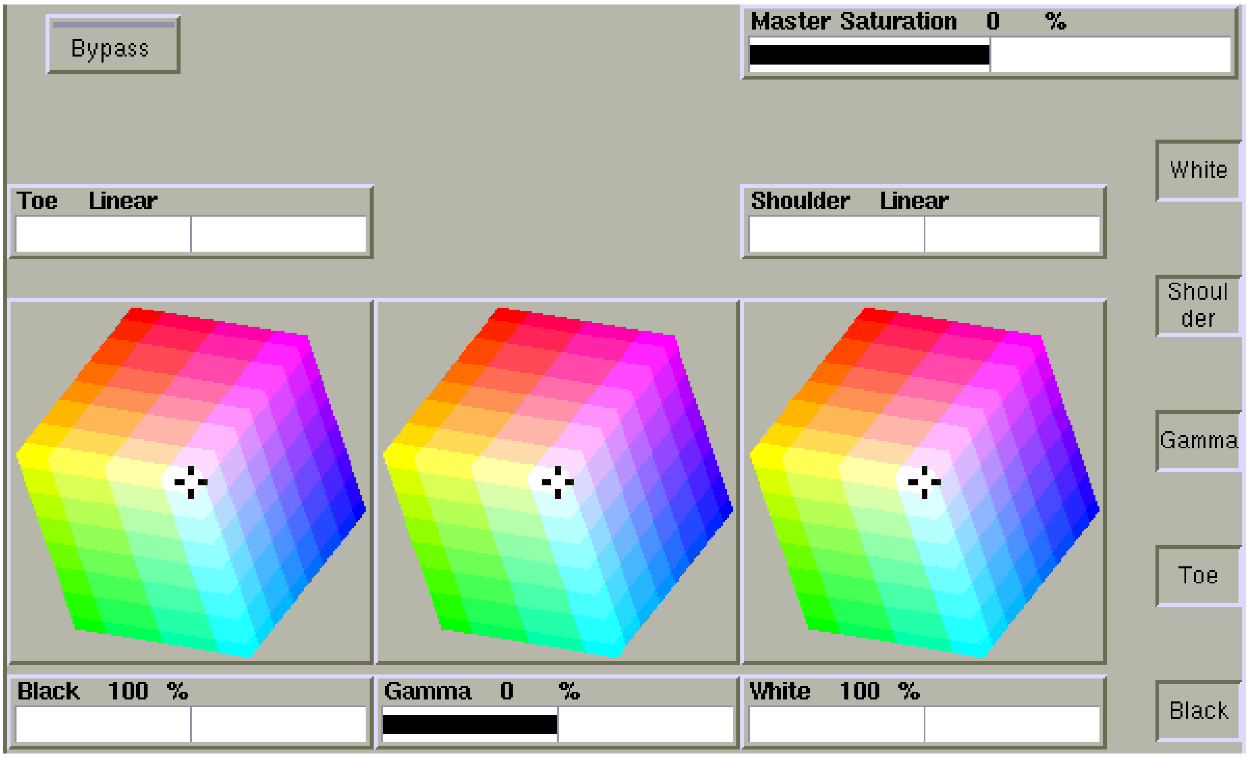


Fig. 38: Main menu **“Color”** / submenu **“Primary”**

Master Saturation	**see 5.12.1**
Toe	**see 5.12.2**
Shoulder	**see 5.12.3**
Delta Gamma Controls	**see 5.12.4**
(Master) Black, (Master) Gamma, (Master) White	**see 5.12.5**
Bypass	**see 5.12.6**

5.12.1 MASTER SATURATION

This key controls the overall color saturation. It works in both directions: you can desaturate or enhance saturation. The default value is 100%.

To operate, use the digipot control or slide directly on the touchscreen.

5.12.2 TOE

This function stretches or compresses the gamma curve in the Blacks/dark parts of the picture. There are 5 positions available: High Compression, Low Compression, Linear, Low Stretch, High Stretch. Linear is the default. To operate, use the corresponding digipot or slide directly on the touchscreen.

Apply low or high compression to easily achieve ”print look” when working with negative film.

Use low or high stretch to brighten up the blacks when working with high contrast Prints.

5.12.3 SHOULDER

This function stretches or compresses the gamma curve in the Whites/light parts of the picture.
There are 5 positions available:
High Compression, Low Compression, Linear, Low Stretch, High Stretch.
Linear is the default.

To operate use the corresponding digipot or slide directly on the touchscreen.

Apply low or high stretch to bring down the lights of a steep Print.

Use low or high compression to brighten up the lights of a flat material.

5.12.4 DELTA GAMMA CONTROLS

These controls are used to change the color balance in the Black, White and Gamma (mid–tone) parts of the picture.

There are two ways of operating: Take a pencil (or your finger) and slide directly on the colored hexagon of the touchscreen. The more comfortable way is to use the trackball. By clicking on the area around the hexagon, the control is delegated to the trackball. The currently active control (Black, Gamma or White) is then highlighted. The cursor inside the hexagon indicates the working position.

5.12.5 (MASTER) BLACK, (MASTER) GAMMA, (MASTER) WHITE

Master BLACK controls the dark parts of the picture.

Master GAMMA controls the mid–tones of the picture.

Master WHITE controls the light parts of the picture.

The combination of these controls and especially bringing GAMMA up or down makes the picture look softer or harder in contrast.

To operate, use the corresponding digipot or slide directly on the touchscreen.

5.12.6 BYPASS

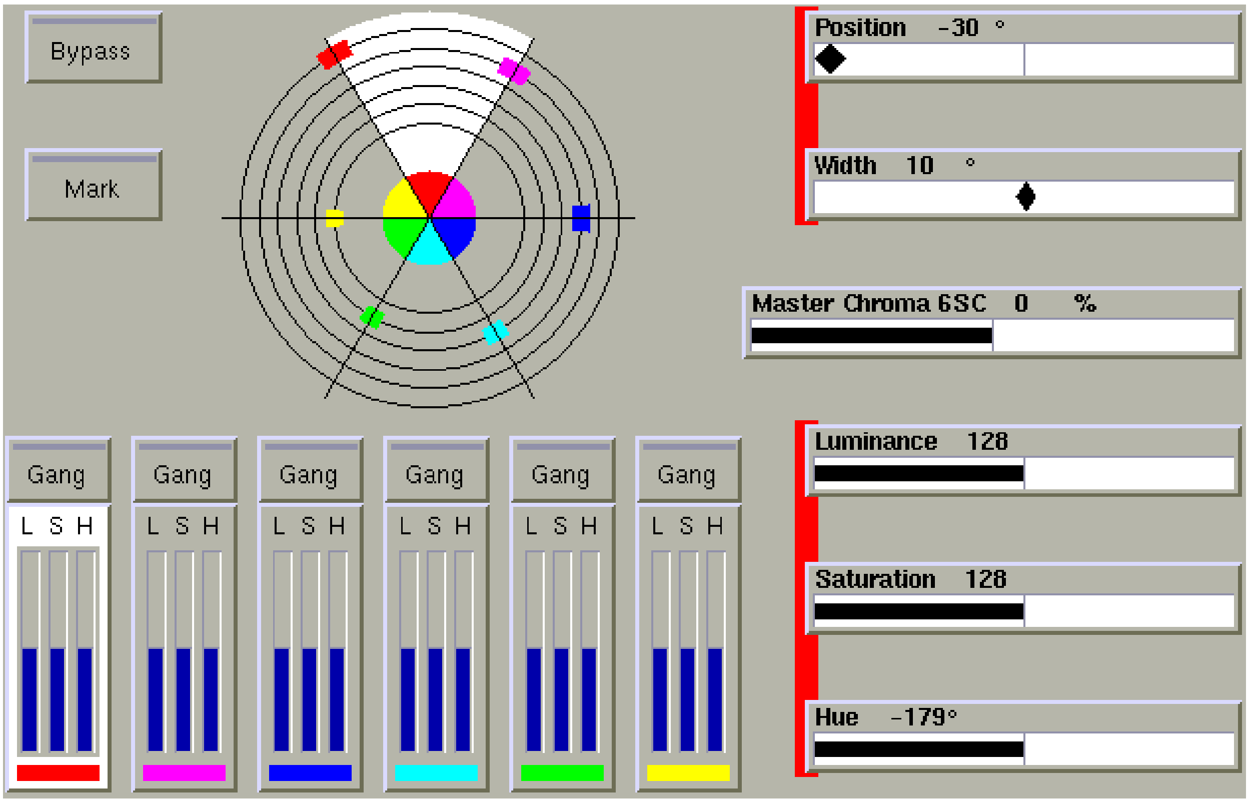
If you want to be sure to look at a picture which is not affected by the Telecine’s Primary Color Correction click on the BYPASS key. BYPASS is enabled when the bar on the button is yellow.

5.13 MAIN MENU “COLOR” / SUBMENU “6-SECTOR (COLOR CORRECTION)”

This menu provides 6–Sector Color Correction.

6–Sector Color Correction allows a selective color correction based on the 6 color sectors:
Red, Green, Blue, Yellow, Cyan and Magenta.

To perform a smooth transition between modified colors, each sector has a central vector (corresponding to the Hue display on a vectorscope), where all modifications apply to 100% whereas towards the sector boundaries modifications decrease to 0 %.



Position -30 °

Width 10 °

Master Chroma 6SC 0 %

Luminance 128

Saturation 128

Hue -179°

Fig. 39: Main menu **“Color”** / submenu **“6-Sector”**

Mark Key	**see 5.13.1**
Qualifying Scheme and Qualifying Keys	**see 5.13.2**
Master Chroma 6SC	**see 5.13.3**
Modifying Bar Graphs and Modifying Keys	**see 5.13.4**
Bypass	**see 5.13.5**

5.13.1 MARK KEY

This feature in conjunction with the QUALIFYING SCHEME makes it easy to separate a certain color which later on can be altered with the MODIFYING KEYS of the 6 Sector Color Correction. Different setups for the 6SC COLOR MARKER can be selected on the next menu page (Col Set). Click on the key to activate the MARK function (enabled when the bar on the key is yellow).

5.13.2 QUALIFYING SCHEME AND QUALIFYING KEYS

This scheme in conjunction with the MARK function serves to separate (to qualify) the color which shall be modified. Enable the MARK function and select the COLOR SECTOR which comes closest by clicking on it. The currently chosen sector is highlighted and the bars of the QUALIFYING and MODIFYING KEYS show the corresponding color.

In dependence of the selected MARK SETUP (Col Set Menu) parts of the picture (on your picture monitor) get in some way highlighted.

There are 2 settings available: SOLOCHROME and FLASHING.

With **SOLOCHROME** enabled only the selected color is visible in the picture. E.g. select the blue sector and the only visible color in the picture is blue. The colors corresponding to the other 5 sectors are desaturated. Now use the POSITION and WIDTH keys in order to refine the color separation within the blue sector.

With **FLASHING** enabled the luminance part of the selected color is alternately switched from 0% to 100% (which results in flashing).

POSITION alters the hue, e.g. if the red you want to modify is rather on the purple–tinted or on the orange–tinted side. To operate, move the slider on the touchscreen or use the digipot control. POSITION ranges from –30° to +30°, default is 0°.
The current position is displayed on the qualifying scheme.

WIDTH defines the angle, i.e. the range of tints that will be affected by the modification.
Big width represents a broad angle, a bigger section of e.g. red tones will be affected, small width represents a thin angle, only few red tones will be affected. To operate, move the slider on the touchscreen or use the digipot control. WIDTH ranges from 10 to 230 degrees, the default value is 60 degrees. The current angle is displayed on the qualifying scheme.

5.13.3 MASTER CHROMA 6SC

This is a saturation control affecting all sectors in the same way. It is different from the saturation control in the COLOR PRIMARY MENU as it is located on the secondary 6SC Correction board.

To operate, move the slider on the touchscreen or use the digipot control. MASTER CHROMA ranges from 0 to 200%, the default value is 100%.

5.13.4 MODIFYING BAR GRAPHS AND MODIFYING KEYS

Once the qualifying is done, the separated color areas can be modified by changing HUE, SATURATION and/or LUMINANCE. To operate, move the slider on the touchscreen or use the corresponding digipot control.
LUMINANCE and SATURATION range from 0 to 200%, default is 100%.
The HUE range is +/–180°.
The LSH modifications are visible in the BAR GRAPH display. The graph which belongs to the activated sector is highlighted and the colorbar of the MODIFYING KEYS shows the corresponding color.

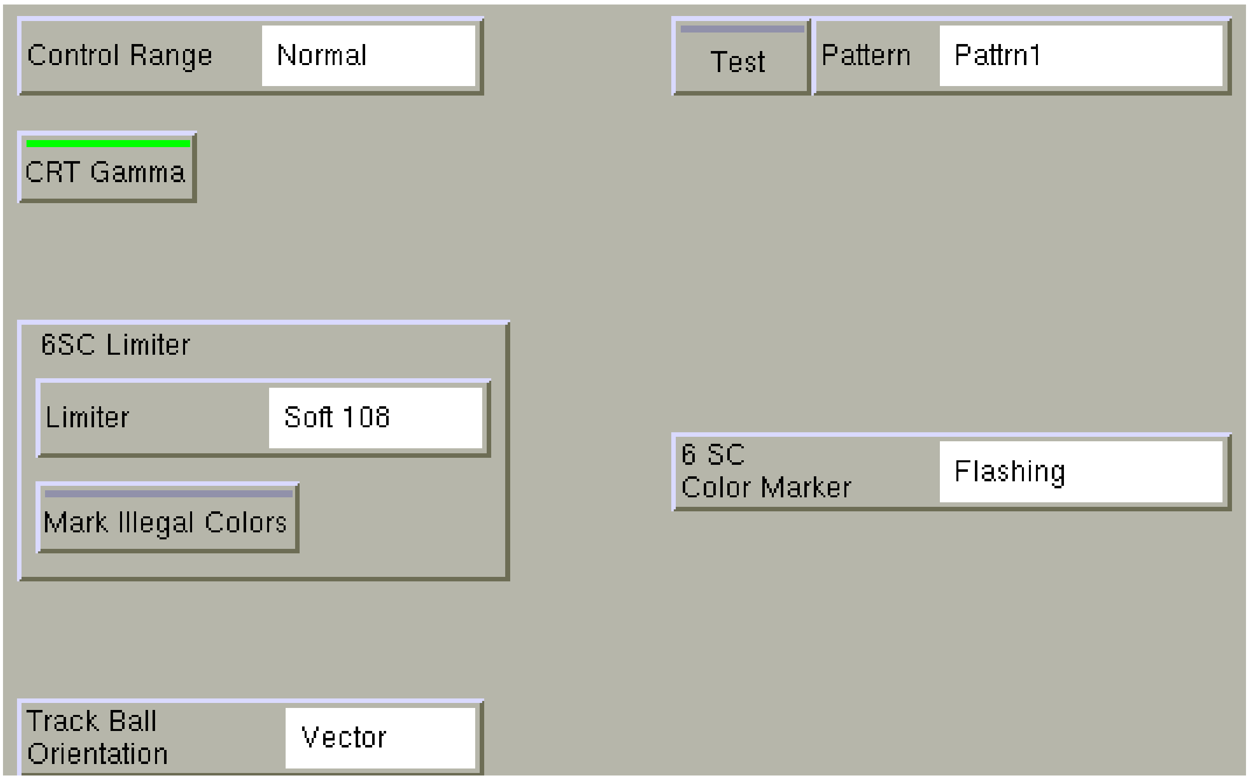
5.13.5 Bypass

If you want to be sure to look at a picture which is not affected by the 6 Sector Color Correction hit the BYPASS key. BYPASS is enabled when the bar on the button is yellow.

Note that all this is happening physically on the 6SC Board, which is an option!

5.14 MAIN MENU “COLOR” / SUBMENU “COL(OR) SET (UP)”

This menu provides various setups related to color grading.



Control Range Normal

Test

Pattern Pattrn1

CRT Gamma

6SC Limiter

Limiter Soft 108

Mark Illegal Colors

6 SC Color Marker Flashing

Track Ball Orientation Vector

Fig. 40: Main menu **“Color”** / submenu **“Col Set”**

Control Range Key	**see 5.14.1**
CRT Gamma	**see 5.14.2**
6-Sector Color Correction Limiter Window	**see 5.14.3**
Mark illegal Color	**see 5.14.4**
6SC Color Marker	**see 5.14.5**
Test Patterns	**see 5.14.6**
Trackball Orientation	**see 5.14.7**

5.14.1 CONTROL RANGE KEY

This button switches the range of BLACK, DELTA BLACK, GAMMA, DELTA GAMMA, WHITE and DELTA WHITE from NORMAL to EXTENDED RANGES.

It acts like a turbo on this Primary Controls. E.g. MASTER WHITE range gets extended up to 10 times, MASTER GAMMA comprises a density range from nearly 0 to 2.5 (in comparison NORMAL RANGE is from 0.3 to 1.7).

In first place, this function makes life easier when working with Interpositive film material.

Be aware of the following differences:
Pressing UNITY leads to different values in EXTENDED RANGE mode compared to NORMAL mode.

In EXTENDED RANGES mode, MASTER GAMMA changes can affect the Blacks and Whites in your picture, whereas in NORMAL mode only the gray tones are addressed. Therefore adjust GAMMA first, then do BLACK (Lift) and WHITE (Gain).

Changing from NORMAL to EXTENDED RANGES within a programmed list requires re–adjustment of BLACK, GAMMA and WHITE.

Dependent on the grading, EXTENDED RANGES may increase noise.

5.14.2 CRT GAMMA

CRT is a gamma function to compensate the gamma of a picture monitor. In order to judge a picture content (in terms of gradation) by looking at a monitor, CRT has to be switched on.

When working with Data, the end product is not necessarily video or a TV picture but a picture recorded back on film or a picture which will be projected by a beamer. In this case, a LUT will be chosen that replaces the CRT gamma by its own characteristic.

Depending on the selected look up table, CRT GAMMA will automatically be switched on or off.
(CRT GAMMA in Data mode is only active with TVLEV and GRLEV.)

When CRT Gamma is active, the green bar on the button is lit.

5.14.3 6-SECTOR COLOR CORRECTION LIMITER WINDOW

There are 6 different limiter settings available:
Soft 108, Hard 108, Soft 102, Hard 102, Soft 100, Hard 100.

”Soft” implies smooth limiting (a knee function is applied),
”Hard” stands for signal clipping.

Value ”100” limits RGB range between 0% and 100%,
value ”102” limits RGB range between 0% and 102%,
value ”108” limits RGB range between –7% and 108%.

”Off” stands for no limitation.

Click on the key and make your choice from the drop–down menu.

Note that this limiter only affects the signal output of the 6SC Board. This is not identical to the output signal of the telecine as the RGB signal coming from the 6SC Board is processed further on.

5.14.4 MARK ILLEGAL COLOR

If enabled (the green bar on the key is lit) all illegal colors according to the selected limiter mode will be highlighted by an inverted luminance signal.

Note that in case the 6SC Limiter is switched to ”Off”, this key has no function.

5.14.5 6SC COLOR MARKER

This menu page contains the 6SC Color Marker Setup. You find the switches to enable the MARKER on the Color/6SC menu. This feature in conjunction with the QUALIFYING SCHEME makes it easy to separate a certain color which later on can be altered with the MODIFYING KEYS of the 6 Sector Color Correction.

There are 2 settings available: SOLOCHROME and FLASHING.

With **SOLOCHROME** enabled only the selected color is visible in the picture. E.g. select the blue sector in the 6SC menu and the only visible color in the picture is blue. The colors corresponding to the other 5 sectors are desaturated. Now use the POSITION and WIDTH keys in order to refine the color separation within the blue sector.

With **FLASHING** enabled the luminance part of the selected color is alternately switched from 0% to 100% (which results in flashing).
Click on the key and –according to your preferences– choose from the drop down menu. The current selection is shown on the key display.

5.14.6 TEST PATTERNS

When Test is enabled, the yellow bar on the key is lit. By pressing the adjacent pattern key, a drop-down menu opens, containing all available Test Patterns.
To select a pattern, click on it.
The current selection is shown on the key display. If it reads ”HDNR Pattern”, a SCREAM Test Pattern is active.

This function is redundant in the Monitoring and in the Home Setup Menu.

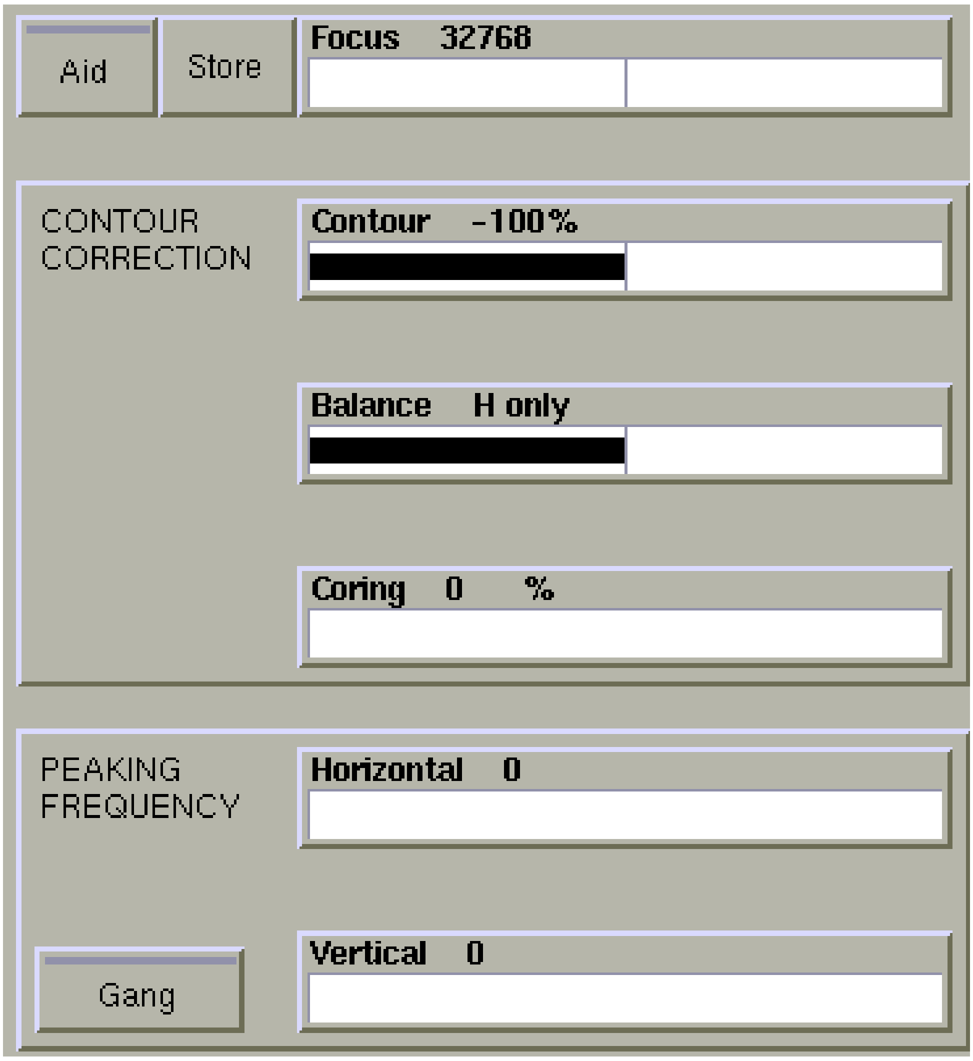
5.14.7 TRACKBALL ORIENTATION

This button refers to the DELTA Controls (Hexagons) of the Color Primary Menu.

The trackball orientation can be switched between VECTOR which means vectorscope like orientation and MKIII. MK III is derived from Rank Mark III machines and it rotates the orientation clockwise through 120° relative to the vectorscope display.

5.15 MAIN MENU “SHARP” / SUBMENU “CONTOUR”

Using the functions of this menu makes a picture look sharper, note that this is a subjective improvement and it does not save you from focussing.



Focus 32768

Contour -100%

Balance H only

Coring 0 %

Horizontal 0

Vertical 0

Fig. 41: Main menu **“Sharp”** / submenu **“Contour”**

Focus, Store, Aid	**see 5.15.1**
Contour Correction Window	**see 5.15.2**
Peaking Frequency (Horizontal and Vertical)	**see 5.15.3**

5.15.1 FOCUS, STORE, AID

The Focus slider controls the focus servo in the telecine.

Focussing can be done either with the digipot control or by sliding on the touchscreen.

To make focussing easier, hit the AID button. This macro function sets zoom and contour to maximum and slows down the film speed to 6 frames per second. Thus, film grain will appear as large and clear as possible which helps to find the optimum focus position.

If the chosen value is very different from the unity setting, this should be saved as the new default. Hitting the STORE button opens a dialog window. With OK, your new setting will be stored and recalled next time when UNITY is pressed.

The default focus setting is important as this value is used during FPN and affects the quality of the FPN.

5.15.2 CONTOUR CORRECTION WINDOW

In the signal path CONTOUR correction happens after color correction.

Contour
This adjustment only addresses the luminance signal. Black and White transitions will be enhanced according to the settings. This happens by adding the differentiated signal of the transition to the original transition signal. Thus, a Black and White transition appears more contrast and therefore sharper. To increase or decrease the CONTOUR, slide on the touchscreen or use the digipot control. As you can see at the range (from –100% to +100%) it is also possible to soften the picture.

Balance
CONTOUR CORRECTION is working in horizontal and vertical direction. The BALANCE Controller weightens the correction in horizontal or vertical direction depending on the setting you choose. The following 7 settings are available: Honly, H3/V1, H3/V2, H3/V3, H2/V3, H1/V3, Vonly. Default is H3/V3, the correction is working equally in both directions.

To change settings, slide on the touchscreen or use the digipot control.

A combination of contour and balance may be very useful to reduce aliasing effects.

Aliasing is caused by the line structure of a picture monitor.

If you need contour enhancement, apply it in combination with Honly or H3/V1, settings which rather stresses the horizontal contour. In case your picture comes along with satisfying sharpness, select Honly and turn contour to negative values in order to reduce aliasing.

Coring
This function enhances contour correction in dependence on detail contrast.
0% CORING (default setting): the selected contour correction applies to all details of the picture.
100% CORING: only the high–contrast details are enhanced (they will get broad contours).
To change the setting, slide on the touchscreen or use the digipot control.

With an adequate setting (e.g. around 10%) it is possible to free certain areas in the picture from disturbances caused by fine, low–contrast detail (e.g. film grain).

5.15.3 PEAKING FREQUENCY (HORIZONTAL AND VERTICAL)

This function offers contour enhancement in dependence on detail size (spatial frequency).

In order to enhance small picture details, select a higher value (high values correspond to high frequencies), to enhance contours of coarse details, select a low value.

To change the settings, slide on the touchscreen or use the digipot controls.

The controls for vertical and horizontal peaking can be handled separately but if there is no need for splitted settings use the GANG function.

5.16 MAIN MENU “SHARP” / SUBMENU “APERTURE” (SPIRIT ONLY)

By principle, the Aperture and Contour functions are different from Spirit to Shadow.

The Aperture menu only applies to the Spirit DataCine film scanner.

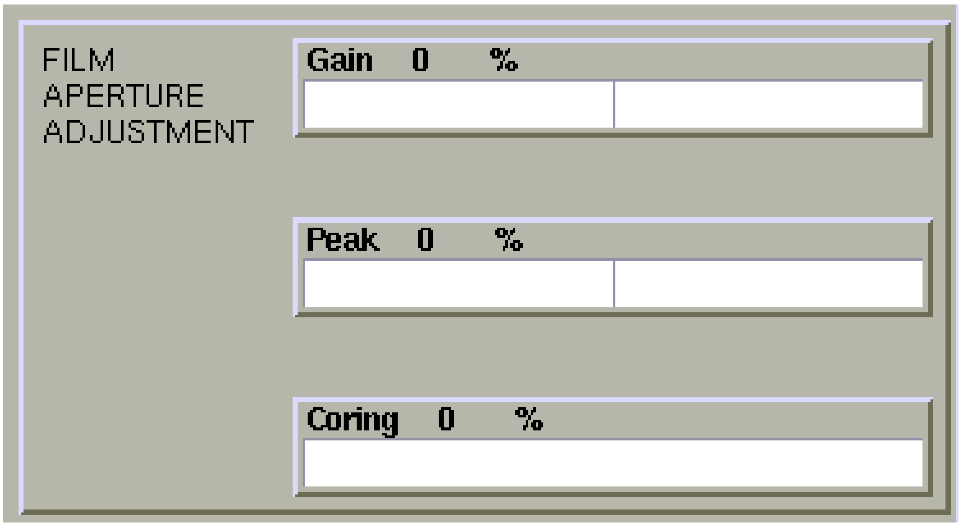


Fig. 42: Main menu **“Sharp”** / submenu **“Aperture”**

Film Aperture Adjustment Window	**see 5.16.1**
Gain	**see 5.16.2**
Peak	**see 5.16.3**
Coring	**see 5.16.4**

5.16.1 FOCUS, STORE, AID

Aperture means system–dependent resolution losses. Aperture correction increases the resolution in order to compensate these losses.

This is achieved by adding a detail signal (a high–passed luminance signal provided by the detail sensors) to the RGB chroma signals.

In the signal path, aperture correction happens before color correction.

Aperture adjustments consist in settings of the three controls:
GAIN, PEAK and CORING.

BE CAREFUL USING THESE TOOLS AS THEY CAN PROVOKE SEVERE MISS–ADJUSTMENTS!

5.16.2 GAIN

This function adjusts the strength of the aperture correction, to which extent the added detail signal is amplified in order to increase resolution.

The range is from 0 to 200%, the default is 100%. To change the setting, slide on the touchscreen or use the digipot control.

Note that CORING should first be set to 0%.

5.16.3 PEAK

This function offers contour enhancement in dependence on detail size (spatial frequency).

In order to enhance small picture details select a higher value (high values correspond to high frequencies), to enhance contours of coarse details, select a low value.

To change the setting, slide on the touchscreen or use the digipot control.

5.16.4 CORING

This function enhances aperture correction in dependence on detail contrast.

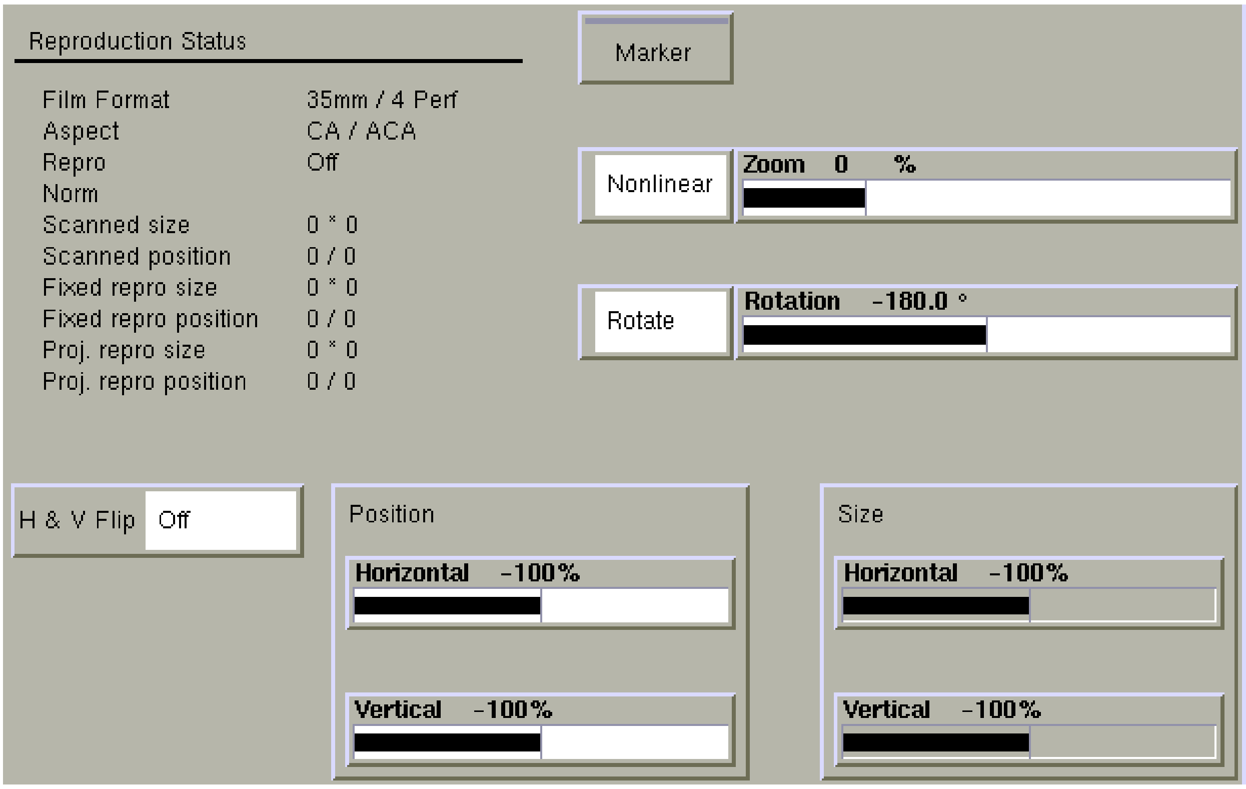
0% CORING (default setting):
the selected aperture correction applies to all details of the picture.

100% CORING:
only the high–contrast details are enhanced (they will get broad contours).
To change the setting, slide on the touchscreen or use the digipot control.

With an adequate setting (e.g. around 10%) it is possible to free certain areas in the picture from disturbances caused by fine, low–contrast detail (e.g. film grain).

5.17 MAIN MENU “SIZING” / SUBMENU “SIZING”

This menu contains Zoom–, Sizing– and Positioning controls, special Scan Effects and a Reproduction overview.



Reproduction Status

Film Format	35mm / 4 Perf
Aspect	CA / ACA
Repro	Off
Norm	
Scanned size	0 * 0
Scanned position	0 / 0
Fixed repro size	0 * 0
Fixed repro position	0 / 0
Proj. repro size	0 * 0
Proj. repro position	0 / 0

Zoom 0 %

Rotation -180.0 °

H & V Flip Off

Position: Horizontal -100 %, Vertical -100 %

Size: Horizontal -100 %, Vertical -100 %

Fig. 43: Main menu **“Sizing”** / submenu **“Sizing”**

Reproduction Status Window	**see 5.17.1**
Zoom	**see 5.17.2**
Rotation	**see LEERER MERKER**
Scan Effects	**see 5.17.3**
H & V Flip	**see 5.17.4**
Position Window	**see 5.17.5**
Size Window	**see 5.17.6**
Marker	**see 5.17.7**

5.17.1 Reproduction Status Window

This window provides no controls, it only shows the settings of the Repro menu.

5.17.2 Zoom

Use this slider to zoom in or out of the picture. Zooming happens electronically. You can switch this control from linear to nonlinear.

Note that Zoom ranges are different from Spirit to Shadow.

Spirit Zoom range:	0.1x to 16x.
Shadow Zoom range:	0.1x to 10.5x

To change the settings, slide on the touchscreen or use the digipot control.

5.17.3 Rotation / Scan Effects

Note that this functions require the ROTATION option and either the picture can be rotated or skewed / tilted.

Click on the button and make your choice from the drop–down menu.
Three selections are available:
ROTATION, VERTICAL and HORIZONTAL RHOMBIC EFFECT.
With the ajacent control the picture can be rotated continuously from –180° to +180° in both senses (without resolution reduction!).

Or the picture can be skewed or tilted in the range of +/–10% which equals 30°. Click on the button to select the effect; to modify, slide on the touchscreen or use the corresponding digipot control.

Note: If this function is controlled via the POGLE Platinum or TK mems SCAN EFFECTS, RHOMBIC-H or RHOMBIC-V has to be activated over the whole correction list. Otherwise the effect will not be executed (even if you need this function only in one event of your list).

5.17.4 H & V Flip

Click on this button and make your choice from the drop–down menu.
Four selections are available:
OFF: no effect,
H ONLY: the picture is flipped horizontally (useful in case the film has been laced up in the wrong sense).
V ONLY: the picture is flipped upside down. Apart from creative aspects, this function can be used in case the reel has been laced up at the end.

BOTH flips the picture in both senses: horizontal and vertical.

5.17.5 Position Window

Shifts the output picture horizontally or vertically by +/– 100%.

Click on the area to activate this function. When active, the sliders are highlighted.

To change the setting, slide on the touchscreen or use the corresponding digipot control.

5.17.6 Size Window

This control changes the geometry of the output picture. It can be squeezed or stretched by +/– 100% in horizontal and vertical direction.

Click on the area to activate the digipot control. When active, the sliders are highlighted.

To change the setting, slide on the touchscreen or use the corresponding digipot control.

5.17.7 Marker

Click on the button to insert the marker into the monitor picture. Marker is active when the yellow bar on the button is lit.

You can see the whole scanned film picture and inside the white lines your defined picture area.

To see how it works, use ZOOM for example and watch the marker lines, then switch MARKER off again.

Note that MARKER is not available with 6 perf (Cinerama) and 8 perf (Vistavision).

5.18 MAIN MENU “SIZING” / SUBMENU “REPRO”

This menu contains scanning and reproduction settings.

On the left side the scanned area of a film picture is displayed. This depends on the following settings:
Fixed Aspect, ACA Emulation, Cinemascope, Fixed Repro, Film Perforation, and Film Format (35, 16 or 8 mm).

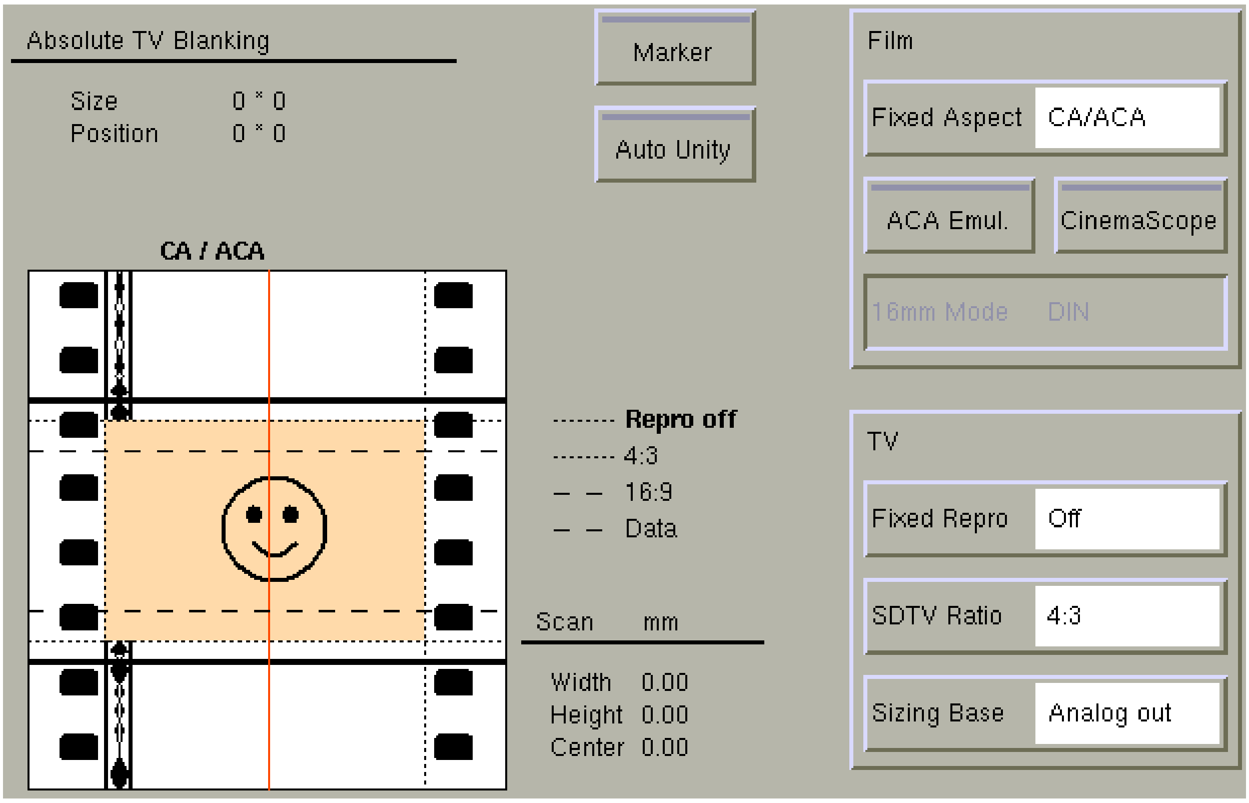
The scanning range is displayed by an orange rectangle.

The chosen Aspect setting is displayed above the film picture.

All possible Repro settings are marked as dotted line.

The actual Repro setting is displayed in bold letters.

The smiley in the center of picture indicates whether the picture is projected uncompressed, compressed (Cinemascope) or rotated (8 perforation).



Absolute TV Blanking
Size 0 * 0
Position 0 * 0

Scan mm
Width 0.00
Height 0.00
Center 0.00

Fixed Aspect CA/ACA
Fixed Repro Off
SDTV Ratio 4:3
Sizing Base Analog out

Fig. 44: Main menu **“Sizing”** / submenu **“Repro”**

Absolute TV Blanking Window	**see 5.18.1**
Film Scanning Window	**see 5.18.2**
TV Repro Window	**see 5.18.3**
Auto Unity	**see 5.18.4**
Marker	**see 5.18.5**

5.18.1 ABSOLUTE TV BLANKING WINDOW

This feature can be used to enter a blanking (e.g. for 1,66:1) if there is no cursor generator at hand. It shows in numeric values the section of the output picture which is read out of the frame store in dependence on both settings, FILM and TV BLANKING.

The upper line shows values for horizontal and vertical size, the lower line for horizontal and vertical position.

5.18.2 FILM SCANNING WINDOW

Fixed Aspect
In this window diverse fixed scan settings are selectable. All these settings are strictly film related corresponding to DIN/SMPTE etc. standards.

The following 8 fixed formats are available:
CA/ACA, Proj, ISO, 2,35:1, 2,20:1, 1,85:1, 1,75:1, 1,66:1.

The number of valid selections depends on the LGA (=Lens Gate Assemblies), ACA EMULATION and CINEMASCOPE.

Click on the upper button and make your choice from the drop–down menu.
The current selection is shown on the key display.

ACA Emulation
It is possible to scan ACA–filmed materials or prints with a comopt soundtrack with a Super lensgate.

Just click on the ACA EMULATION button (enabled when the green line is lit) and the output picture looks like from an ACA lensgate.
But this way you will suffer from eventual stray light, the preferable solution is to insert the ACA gateblock in the Super LGA.

Cinemascope
This button enables anamorphotic reproduction of the film image.

A Cinemascope image on film is squeezed vertically on a film frame of 1.33:1 ratio.

The Cinemascope button enables the reproduction of unsqueezed picture content in typical Cinemascope ratio of 2.20:1 or 2.35:1.

Cinemascope function is enabled when the green line on the key is lit.

16mm Mode
Here the horizontal center position for 16mm films can be switched to a DIN–conform setting or an ISO–conform setting.

5.18.3 TV REPRO WINDOW

Repro in general switches Blanking on or off (avoids horizontal or vertical cache).

Repro makes the picture fit the monitor format (4:3 or 16:9).
This is achieved by zooming in what implies horizontal or vertical losses of picture information.

The following reproduction formats are selectable: OFF, 4:3, 16:9 and DATA.

OFF: the picture is reproduced according to the selected aspect ratio.
4:3: the picture is reproduced in 1.33:1 ratio which means full format on a 4:3 monitor.

16:9: the picture is reproduced in 1.78:1 ratio which means full format on a 16:9 monitor.

DATA has two meanings: for video the picture is reproduced in 1.85:1 ratio which is a TV compromise format for Cinemascope (loosing picture information on both sides in exchange for smaller letterbox bars).

For Data application: the picture is reproduced into the OUTPUT IMAGE SIZE (e.g. 1920x1440).

Click on the button and make your choice from the drop–down menu.
The current setting is shown on the key display.

SDTV Ratio
Picture aspect ratio for the SDTV output can be switched from 4:3 to 16:9.

Click on the button and make your decision from the drop–down menu.
The current setting is shown on the key display.

Sizing Base
SIZING BASE affects the pixel geometry.

This function tries to cover the gap between analog and digital standards.

The analog standard defines: active videoline is approx. 52µs.

The digital standard CCIR 601defines 720 pixels per line with a clock rate of 74ns per pixel (13,5 MHz pixel clock).

As a result the active videoline is 53,28µs.

Now in order not to extend the active videoline of 52µs (corresponding to the analog standard), the pixels are squeezed horizontally.
This is what happens when SIZING BASE is switched to analog, it looks like a change in horizontal size (x–Zoom).

The standard setting is digital.

5.18.4 AUTO UNITY

With AUTO UNITY enabled (green bar on the key is lit) you can select a new FIXED ASPECT RATIO and automatically all variable settings of the Sizing and Blanking menus will be switched to unity.

In order to keep these settings after choosing a new FIXED ASPECT RATIO, disable AUTO UNITY.

5.18.5 MARKER

Click on the button to insert the marker into the monitor picture.
Marker is active when the yellow bar on the button is lit.

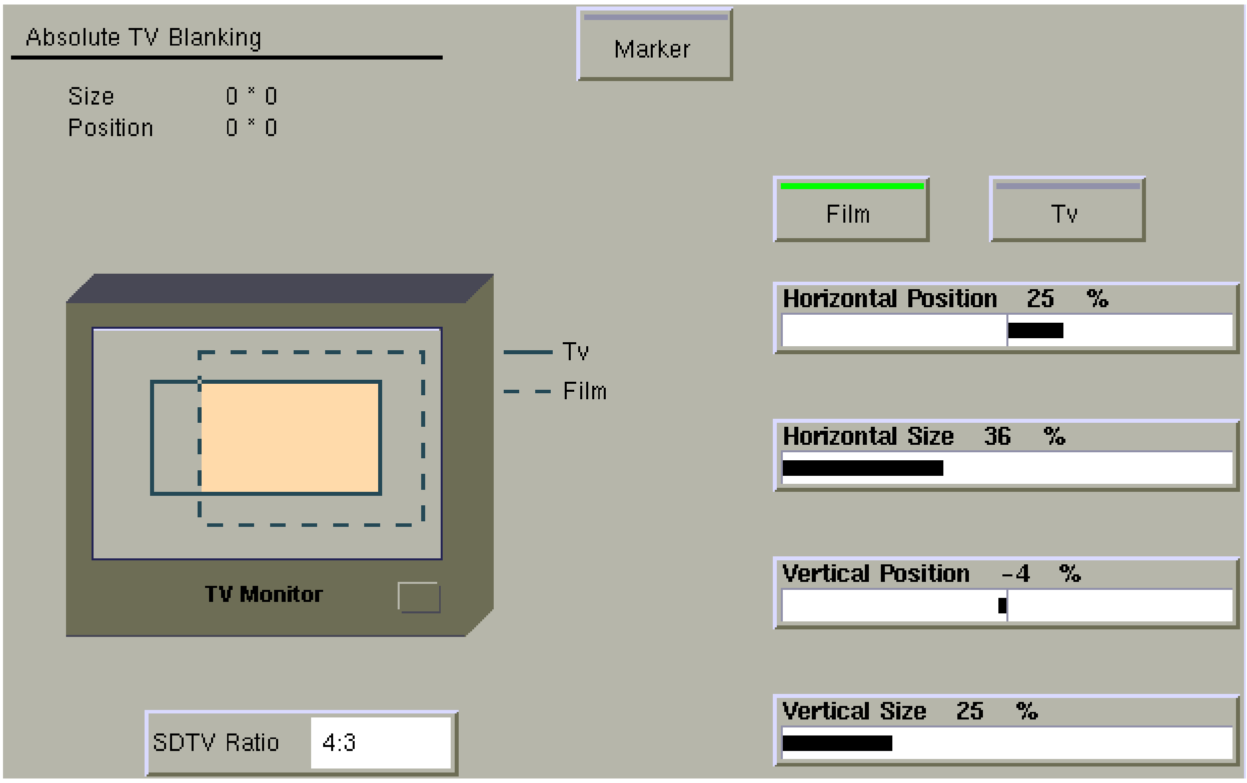
You can see the whole scanned film picture and inside the white lines your defined picture area.

To see how it works, use ZOOM for example and watch the marker lines, then switch MARKER off again.

Note that MARKER is not available with 6 perf (Cinerama) and 8 perf (Vistavision).

5.19 MAIN MENU “SIZING” / SUBMENU “BLANKING”

This menu contains Film and TV Blanking controls.



Absolute TV Blanking

Size 0 * 0
Position 0 * 0

Horizontal Position 25 %
Horizontal Size 36 %
Vertical Position -4 %
Vertical Size 25 %

SDTV Ratio 4:3

Fig. 45: Main menu **“Sizing”** / submenu **“Blanking”**

Absolute TV Blanking Window	**see 5.19.1**
Film Blanking Window	**see 5.19.2**
TV Blanking Window	**see 5.19.3**
Marker	**see 5.19.4**
TV Monitor Symbol	**see 5.19.2 / 5.19.3**

5.19.1 ABSOLUTE TV BLANKING WINDOW

This feature can be used to enter a blanking (e.g. for 1,66:1) if there is no cursor generator at hand. It shows in numeric values the section of the output picture which is read out of the frame store in dependence on both settings, FILM and TV BLANKING.

The upper line shows values for horizontal and vertical size, the lower line for horizontal and vertical position.

5.19.2 FILM BLANKING WINDOW

Click on the “Film” button to delegate the digipots to Film Blanking adjustments.

The Film Blanking adjustments (SIZE and POSITION) determine the section of the picture which is written into the frame store.

Film Blanking becomes part of the picture (with black content). E.g. when you zoom or rotate the picture also the blanking will be zoomed or rotated.

All controls range from –100 to +100%. To change settings, slide on the touchscreen or use the corresponding digipot control.

The actual Film Blanking adjustments are displayed on the “TV Monitor” symbol.

The reproduced (resulting) picture is the orange marked area (the overlapping section of the Film and the TV rectangle).

5.19.3 TV BLANKING WINDOW

Click on the “TV” button to delegate the digipots to TV Blanking adjustments.

The TV Blanking adjustments (SIZE and POSITION) determine the section of the picture which is read out of the frame store.

TV Blanking is not part of the picture, it behaves like an external Blanking rendered by a production switcher. E.g. you can zoom or rotate your picture and the TV blanking will not be affected by it.

All controls range from –100 to +100%. To change settings, slide on the touchscreen or use the corresponding digipot control.

The actual TV Blanking adjustments are displayed on the “TV Monitor” symbol.

The reproduced (resulting) picture is the orange marked area (the overlapping section of the Film and the TV rectangle).

5.19.4 MARKER

Click on the button to insert the marker into the monitor picture.
Marker is active when the yellow bar on the button is lit.

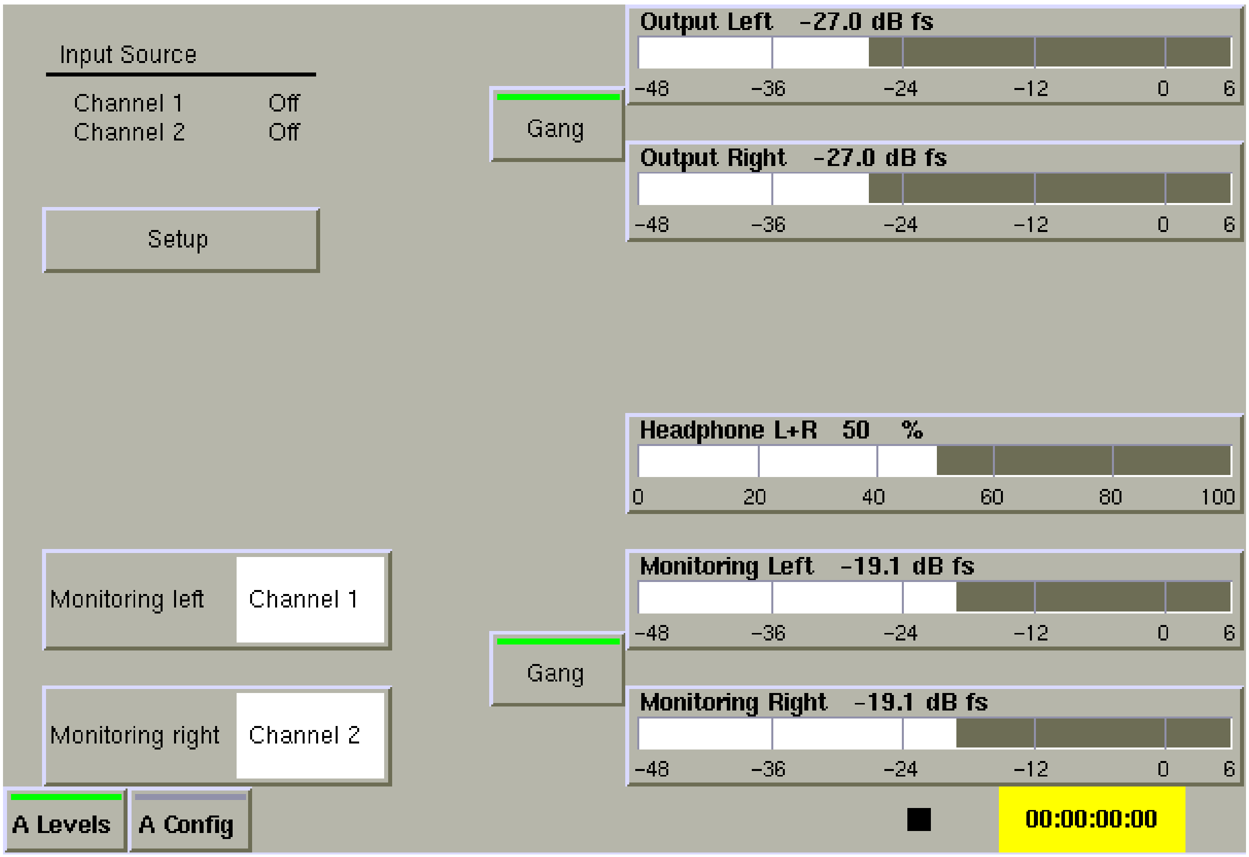
You can see the whole scanned film picture and inside the white lines your defined picture area.

To see how it works, use ZOOM for example and watch the marker lines, then switch MARKER off again.

Note that MARKER is not available with 6 perf (Cinerama) and 8 perf (Vistavision).

5.20 MAIN MENU “AUDIO” / SUBMENU “AUDIO LEVELS”

This menu covers all sorts of Audio levels.



Input Source

Channel 1 Off
Channel 2 Off

Output Left -27.0 dB fs

Output Right -27.0 dB fs

Headphone L+R 50 %

Monitoring Left -19.1 dB fs

Monitoring Right -19.1 dB fs

Monitoring left Channel 1

Monitoring right Channel 2

00:00:00:00

Fig. 46: Main menu **“Audio”** / submenu **“Audio Levels”**

Input Source Window	**see 5.20.1**
Output Level Control	**see 5.20.2**
Headphone Attenuator	**see 5.20.3**
Monitoring Selection (Left, Right)	**see 5.20.4**
Monitoring Attenuator (Left, Right)	**see 5.20.5**

5.20.1 INPUT SOURCE WINDOW

It shows which input source is switched to channel 1 and to channel 2.

5.20.2 AUDIO OUTPUT LEVEL CONTROL

These keys control the AUDIO OUTPUT LEVEL for the left and right channels.
To modify, slide on the touchscreen or use the digi pot control.
Audio range is from –48 dB fs to +6 dB fs (fs = Full Scale).
A level meter shows the current level and a peak value of your current program sound.

5.20.3 HEADPHONE ATTENUATOR

This key controls the headphone output level.
To modify, slide on the touchscreen or use the digi pot control.
The range is from 0 to 100%.
The current setting is shown on the key display.

5.20.4 MONITORING SELECTION (LEFT, RIGHT)

For MONITORING LEFT and MONITORING RIGHT, four selections are possible: Off, Channel 1, Channel 2, Both.
Click on the button and make your choice from the drop-down menu.

5.20.5 MONITORING ATTENUATOR (LEFT, RIGHT)

These keys control the MONITORING output level for the left and right channels.
To modify, slide on the touchscreen or use the digi pot control.
The range is from –48dB to +6dB.
The current settings are shown on the key displays.

Note that **AUDIO is an option** on your DataCine / Telecine!

5.21 MAIN MENU “AUDIO” / SUBMENU “AUDIO CONFIG”

This menu gives an overview of the internal Audio processing and contains all kinds of audio-related settings.

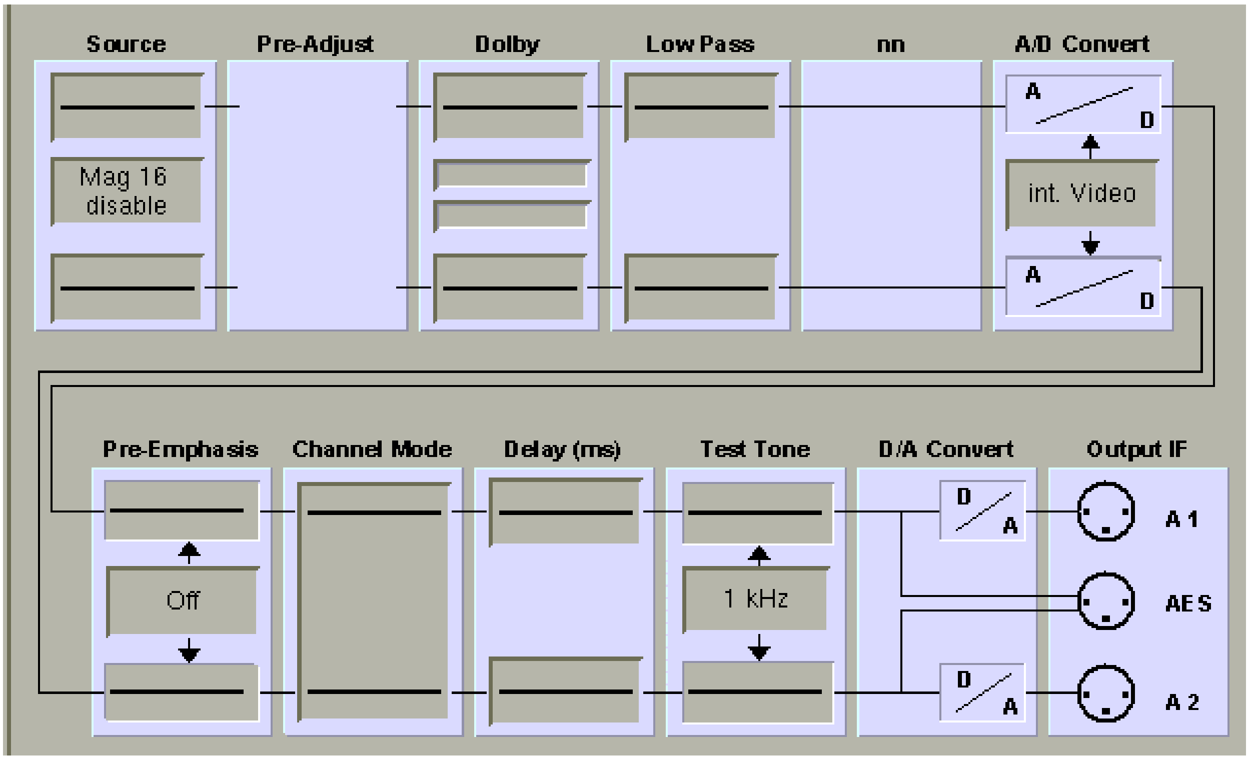


Fig. 47: Main menu **“Audio”** / submenu **“Audio Config”**

Audio Source Selection	**see 5.21.1**
Pre-Adjust (Factory settings only)	**see 5.21.2**
Dolby Selection	**see 5.21.3**
Lowpass Filter	**see 5.21.4**
A/D Convert	**see 5.21.5**
Pre–Emphasis	**see 5.21.6**
Channel Mode	**see 5.21.7**
Audio Delay	**see 5.21.8**
Test Tone	**see 5.21.9**

5.21.1 AUDIO SOURCE SELECTION

Click on this section to open the SOURCE SELECTION window.
There you will find a SOURCE SELECTION KEY for each channel.
Click on these keys and make your choice from the drop down menu.

The selections for Channels 1 and 2 are different:
Channel 1 can be switched to Off, Magnetical (only for 16mm films), Optical, Ext 1 and Test Tone;
Channel 2 can be switched to Off, Optical, Ext 2 and Test Tone.

The current settings are shown on the key display.

To exit the window, click on the Close button.

5.21.2 PRE-ADJUST (FACTORY SETTINGS ONLY)

Do not worry too much about the content of this window as it contains basic factory settings.

5.21.3 DOLBY SELECTION

Click on this section to open the DOLBY SELECTION window. There you will find a DOLBY SELECTION key and a DOLBY LEVEL control for each channel.
Click on the keys and make your choice from the drop down menu.
The actual choice is between None and Dolby SR. Dolby A is not selectable.
DOLBY SR (Spectral recording) refers to an external decoder unit as there is no internal decoder.
DOLBY LEVEL control is used to adjust the Dolby output level.

Switch on the Dolby test tone of your external device and compare the deflection (see level meter) with what is coming out when you play the Dolby test tone section of your film copy. Adjust this level until it shows the same reading as the test tone coming from the decoder unit.

To adjust slide, on the touchscreen or use the digi pot control (the range is from 0 to 100%).
The current settings are shown on the key displays.

To exit the window click on the Close button.

5.21.4 LOWPASS FILTER

Click on this section to open the LOWPASS filter window.
The LOWPASS keys enable or disable a 5kHz filter, it can be switched separately for each channel.
Listen to the film sound quality and then decide.
The key display shows whether the filter is enabled or not.

To exit the window, click on the Close button.

5.21.5 A/D CONVERT

Click on this section to open the A/D CONVERT window.
There you find the A/D converter key (one for both channels) which switches the reference between int. Video and ext. 48 kHz.

This means, the audio A/D converters are locked to the internal video signal or they are locked to an external studio clock of 48 kHz.
The standard setting is int. Video.

To exit the window, click on the Close button.

5.21.6 PRE–EMPHASIS

Click on this section to open the PRE-EMPHASIS window.
There you find the Pre-Emphasis key (one for both channels) which enables or disables a CD–type pre emphasis.

Pre-emphasis means peaking of frequency components before A/D conversion in order to improve the signal-to-noise ratio.

The key display shows whether enabled or not.

To exit the window, click on the Close button.

5.21.7 CHANNEL MODE

Click on this section to open the CHANNEL MODE window.
Here you can switch from 2 CHANNEL to SINGLE CHANNEL mode.

2 CHANNEL is the adequate mode for stereo signals,
SINGLE CHANNEL distributes one channel to both outputs
(suitable for mono signals).

To exit the window, click on the Close button.

5.21.8 AUDIO DELAY

Click on this section to open the AUDIO DELAY window.
The audio delays which are adjustable in this window compensate picture signal processing time caused by external devices (such as secondary color correctors, noise reducers, etc.).

The range is from –60 to +1000 ms in steps of 10 ms. Internal audio delays, different for each film format (in dependence on the pitch between picture and audio scanners), are corrected automatically by the telecine.

To adjust the delays, slide on the touchscreen or use the corresponding digi pot controls.

To exit the window, click on the Close button.

5.21.9 TEST TONE

Click on this section to open the TEST TONE window.

There are 2 different audio test signals available:
1 kHz (standard setting) and 10 kHz.

This feature can be used for quick check of all involved audio components.
To select, click on the corresponding key.

The current setting is shown on the key display.

To exit the window, click on the Close button.

Note that **AUDIO is an option** on your DataCine / Telecine!

5.22 MAIN MENU “SPECIAL” / SUBMENU “SCREAM”

This menu contains the SCREAM grain reducer.

The SCREAM is a resolution and format independent grain reducer which is plugged in between Rack 2 and Rack 3. It consists basically of two sections, the GRAIN REDUCTION (in the Highpass filter path) and the FLICKER FILTER (in the Lowpass filter path).

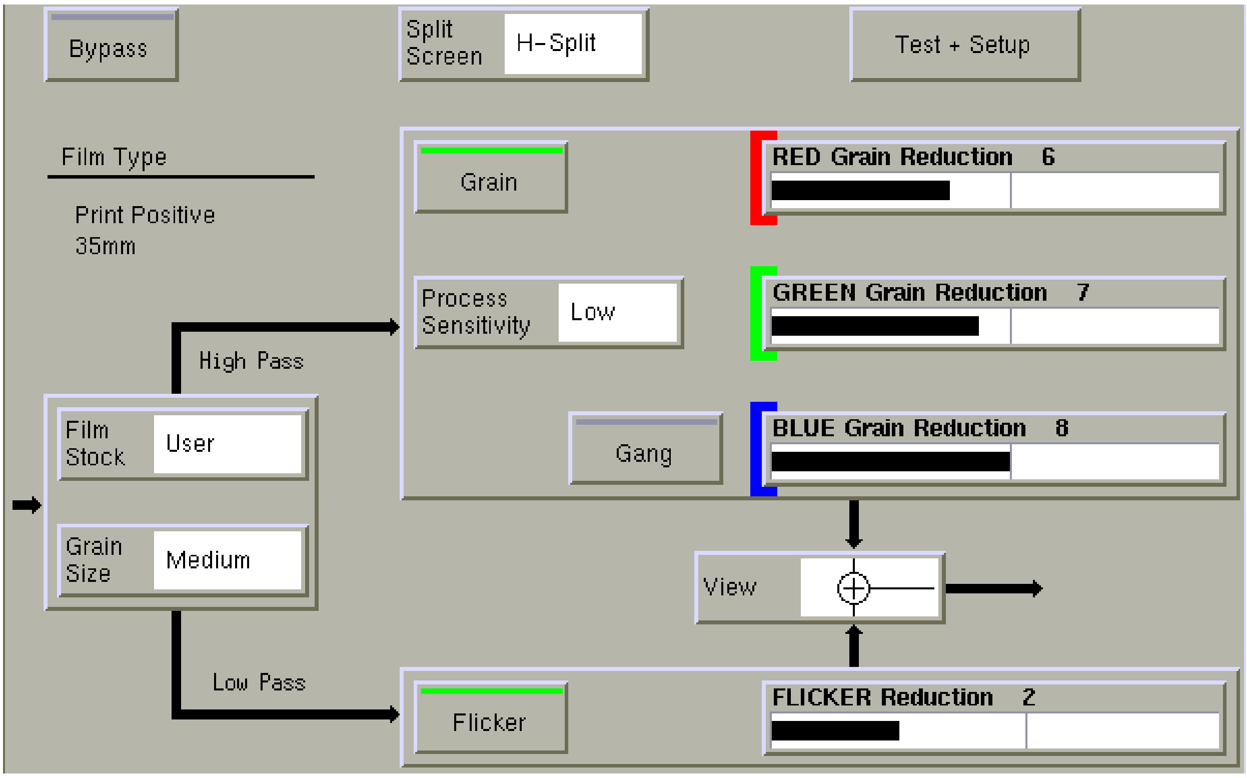


Fig. 48: Main menu **“Special”** / submenu **“Scream”**

Film Type Display	**see 5.22.1**
Bypass	**see 5.22.2**
Split Screen Button	**see 5.22.3**
View (Highpass, Lowpass)	**see 5.22.4**
User (Film Stock Selection)	**see 5.22.5**
Grain Size / Frequency Splitter	**see 5.22.6**
Grain Reduction Filter Window	**see 5.22.7 to 5.22.10**
Flicker Reduction Filter Window	**see 5.22.11**
Test + Setup	**see 5.22.12**

5.22.1 FILM TYPE DISPLAY

Informs about the film material which is currently laced up on your telecine.

Note: In case the SCREAM is not connected or switched off, the display turns red and it reads ”not connected”.

5.22.2 BYPASS

If you want to be sure to look at a picture which is not affected by the SCREAM, click on the BYPASS button. BYPASS is enabled when the bar on the key is yellow.

5.22.3 SPLIT SCREEN BUTTON

Split screen can be switched to H–Split, to V–Split or off.
This function is a tool to compare the filtered half (right or bottom) of the picture with the non–filtered half (left or top).
Click on the button and make your choice from the drop down menu.
(Of course your choice will depend on the picture content.)

The current setting is shown on the key display.

5.22.4 VIEW (HIGHPASS, LOWPASS)

This is a help function for specific grain and flicker adjustments.
Click on the VIEW button and make your choice from the drop down menu.

The upper symbol stands for Highpass mode, with this selection your picture turns Grey and only the high frequency parts (details) are visible. If there is grain in the picture this will also still be visible.

GRAIN SIZE selection gets much easier with this setting as you can concentrate on the picture details of which grain is part of.

The lower symbol stands for Lowpass mode, with this selection the picture gets softened as all details are removed. Only the low-frequency parts of the picture (large areas) are visible.
Film grain of course will also disappear. This setting can be used to adjust the FLICKER FILTER strength as you can concentrate on the low–frequency artifacts to which flicker belongs.

The symbol in between (with the plus sign) stands for normal operation mode where highpass and lowpass signals are added in order to generate the full bandwidth signal again.

5.22.5 USER (FILM STOCK SELECTION)

Press here to open a drop down menu containing grain reduction settings related to different film stocks. The selection includes twelve settings for Kodak stocks, of which six belong to 16mm film and six to 35mm. The same applies to twelve Fuji film settings. Make your choice according to the film stock you currently work with.
GRAIN SIZE / FREQUENCY SPLITTER and the GRAIN REDUCTION RGB sliders are preadjusted to default settings according to the selected film stock.

5.22.6 GRAIN SIZE / FREQUENCY SPLITTER

This device works like a frequency splitter with four different settings:
Small, Medium, Large and Xlarge.
Click on the GRAIN SIZE key and make your choice from the drop down menu.
To make your selection easier switch VIEW to Highpass mode. Try to find an adequate (grain size) setting which minimizes the visibility of grain without harming too much the picture details.
E.g. for 35mm Print film, grain size ”Large” is recommended.
The current setting is shown on the key display.

GRAIN REDUCTION FILTER WINDOW

5.22.7 GRAIN REDUCTION BUTTON

Click on the GRAIN button to enable or disable Grain reduction.
When enabled, the bar on the button is green.

5.22.8 GRAIN REDUCTION RGB SLIDERS

The RGB SLIDERS form a new feature for even more specific grain reduction.
The strength of grain reduction can be set here individually for each channel.
The range is from 0 to 15 in steps of one.
To modify, slide on the touchscreen or use the digi pot control.
The current setting is displayed as a bargraph with the corresponding values on top.
There may be need for such specific settings as film material consists of layers containing silver halogenide grains sensibilized for red, green and blue light.
Later on they react with the corresponding dyes (yellow, cyan and magenta) to create a colored picture.
Different layers may respond in different ways to sensibilization, exposure and processing and therefore the impression of granularity may differ from one layer to another.

With the SCREAM there is no need for grain filter selection (Transversal, Recursive, etc.).

According to the filter strength setting of the RGB channels, grain filter selection is automatically performed:
R, G or B Grain reduction 0: no filter active
R, G or B Grain reduction 1–7: only transversal filter active
R, G or B Grain reduction 8–15: both transversal and recursive filters active

TRANSVERSAL FILTER (roughly) works according to the following method:
The output pixel is averaged (median value) from the same pixels of three successive pictures and the vertically adjacent pixels of the center frame. Because there is calculation involved, it takes some processing time.
This filter is working with a constant quality, no matter how far away from a scene change event.

RECURSIVE FILTER (roughly) works according to the following method:
The averaging of the output pixel here is a process, involving pixels of all preceding pictures after the last scene change up to the current picture.

The output pixel averages the current pixel with the same, already averaged pixel of the previous picture... which itself already is the average of the previous recursion.
That is why this filter of course works much stronger than the Transversal Filter (be careful: in some cases maybe even too aggressive for your desired application) but with increasing effect the further you get from the last scene change.

5.22.9 GANG

This button concertedly controls a group of keys.
With GANG activated (green bar on the key is lit), the strength of grain reduction in all three channels (RGB) is modified by touching only one of the controls.

5.22.10 PROCESS SENSITIVITY (MOTION THRESHOLD)

The threshold of the Recursive filter processing can be modified with the PROCESS SENSI key.
Three different settings are selectable: LOW, NORMAL, HIGH.
Click on the key and make your choice from the drop down menu.
The current setting is shown on the key display.
LOW stands for low motion thresholding (i.e. high suppression of the filtering). Motion detection in this setting works very sensitive and therefore effectively suppresses grain reduction in dependency of picture content.
The more movement in the picture, the less grain reduction is applied in order to avoid artifacts.
NORMAL stands for well–balanced grain filtering and suppression by the motion detector.
HIGH stands for high motion thresholding (i.e. low suppression of the filtering). Motion detection in this setting is quite insensitive, therefore grain reduction works very effectively although there is movement in the picture.
Be careful with this setting as artifacts may occur!

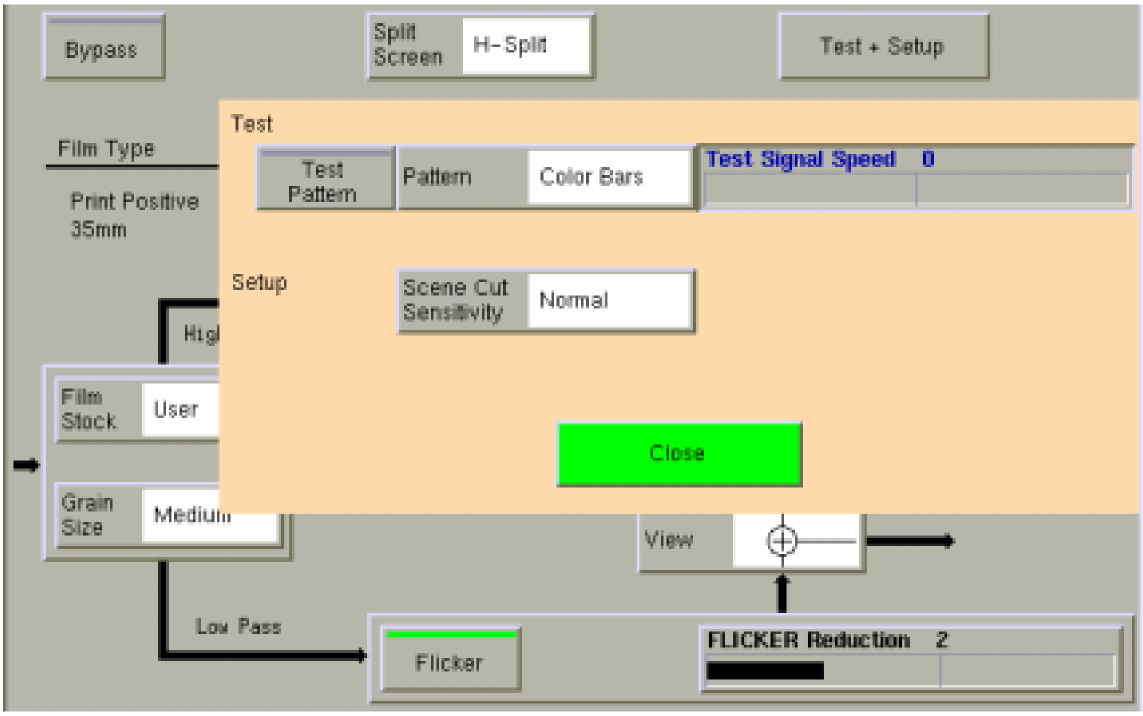
5.22.11 FLICKER REDUCTION FILTER WINDOW

The only thing that can be adjusted in this window is the strength of flicker reduction.
Click on the FLICKER key to enable or disable flicker reduction. When enabled, the bar on the button is green.
To modify the strength of flicker reduction, slide on the touchscreen or use the digi pot control. The range is from 0 to 7 in steps of one.
The current setting is displayed as a bargraph with the corresponding values on top.

Flicker reduction can be very useful in case of flickering neon tubes (as light source on the film scene) or old black&white films which usually flicker because of unsteady film transport.

5.22.12 TEST + SETUP

This window integrates Test Pattern Selection, Scream Setups and other Setups.



Split Screen: H-Split

Film Type: Print Positive 35mm

Pattern: Color Bars

Test Signal Speed 0

Scene Cut Sensitivity: Normal

Film Stock: User

Grain Size: Medium

FLICKER Reduction 2

Fig. 49: Main menu **“Special”** / submenu **“Scream”** with opened window **“Test + Setup”**

5.22.13 TEST PATTERNS

When TEST PATTERN is enabled the yellow bar on the key is lit.
By pressing the adjacent PATTERN KEY, a drop-down menu opens containing all available Test Patterns (here: Color Bars, Multiburst, Black and Sawtooth).
To select a pattern, click on it. The current selection is shown on the key display.
If it reads ”TK Pattern”, a telecine Test Pattern is active.
Test signal speed is only available in conjunction with the Sawtooth pattern.
To change the speed, slide on the touchscreen or use the digi pot control.

A similar function related to TK TEST PATTERNS (with a much bigger choice) can be found in the Color/Setup, Home/Setup and in the Monitoring Menu.

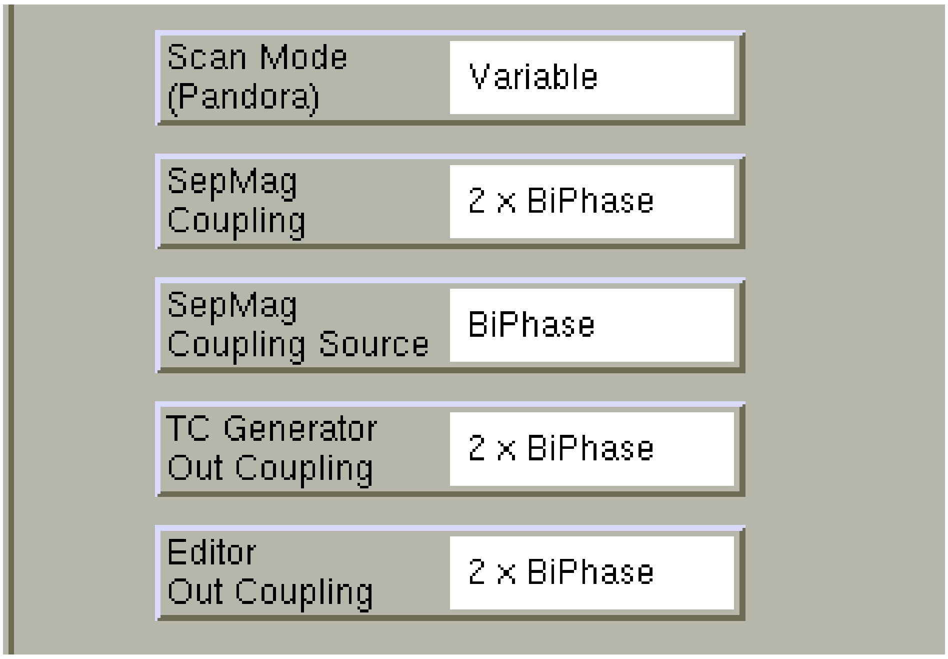
5.22.14 SCENE CUT SENSITIVITY

With this key, the sensibility of the built–in scene change detector can be modified.
The standard setting is NORMAL. In case the film material you are working with consists in a number of scenes which hardly vary, it is recommended to switch the sensibility to HIGH.
In this case even small changes in picture content will be considered.
When ”taking” old print films with flicker and jumping transitions rather choose LOW to avoid events where there aren’t any.
To change, click on the key and choose from the drop down menu.
The current setting is shown on the key display.

Note: **The SCREAM delay is 1 frame and 8 lines, Rack 3 of the telecine recognizes a plugged-in SCREAM and automatically compensates this delay.**
SCREAM is an option to your telecine, enabled only after the correct options code has been typed in.

5.23 MAIN MENU “SPECIAL” / SUBMENU “EXTERN D”

This menu contains various setups which are needed in combination with external devices.



Scan Mode (Pandora)	Variable
SepMag Coupling	2 x BiPhase
SepMag Coupling Source	BiPhase
TC Generator Out Coupling	2 x BiPhase
Editor Out Coupling	2 x BiPhase

Fig. 50: Main menu **“Special”** / submenu **“Extern D”**

Scan Mode (Pandora)	**see 5.23.1**
SepMag Coupling	**see 5.23.2**
SepMag Coupling Source	**see 5.23.3**
TC Generator Out Coupling	**see 5.23.4**
Editor Out Coupling	**see 5.23.5**

5.23.1 SCAN MODE

Scan mode can be switched between VARIABLE and FIXED.
This setup is needed in particular for the MEGADEF from Pandora.
The standard setting is VARIABLE but with a MEGADEF plugged in between Rack 2 and Rack 3 it has to be switched to FIXED. FIXED assures that the number of scanned lines is constant, no matter whether you are working with a 50Hz or with a 60Hz standard (video or data).
Click on the key and select from the drop down menu.
The current setting is shown on the key display.

Note that this function is not yet available with the SHADOW Telecine.

5.23.2 SEPMAG COUPLING

Biphase signals are generated internally by dividing down pulses coming from the sprocket wheel.
Here the Biphase signal is used to synchronize external SepMag units. It can be switched between 2x Biphase (48/50Hz), 10x Biphase (240/250Hz) and 1x Biphase (24/25Hz), referring to the SEPMAG OUT connector of Rack 2.
To find out the correct setting, check manual of connected device.
To modify, click on the key and select from the drop down menu.
The current setting is shown on the key display.

5.23.3 SEPMAG COUPLING SOURCE

SepMag Players can either be synchronized on BIPHASE or TIMECODE signals generated by the DataCine/Telecine.
Audio Delay is set to ’ZERO’ in case a SepMag Player is coupled via TIMECODE with the DataCine/Telecine and the audio outputs from the player are connected to Audio In of the SPIRIT/Shadow.
The audio output of the DataCine/Telecine then has a correct timing to the video signal.
To modify, click on the key and select from the drop down menu.
The current setting is shown on the key display.

5.23.4 TC GENERATOR OUT COUPLING

Biphase signals are generated internally by dividing down pulses coming from the sprocket wheel.
Here the Biphase signal is used to synchronize external time code units (e.g. keycode reader).
It can be switched between 2x Biphase (48/50Hz), 10x Biphase (240/250Hz) and 1x Biphase (24/25Hz), referring to the TC GEN OUT connector of Rack 2.
To find out the correct setting, check manual of connected device.
To modify, click on the key and select from the drop down menu.
The current setting is shown on the key display.

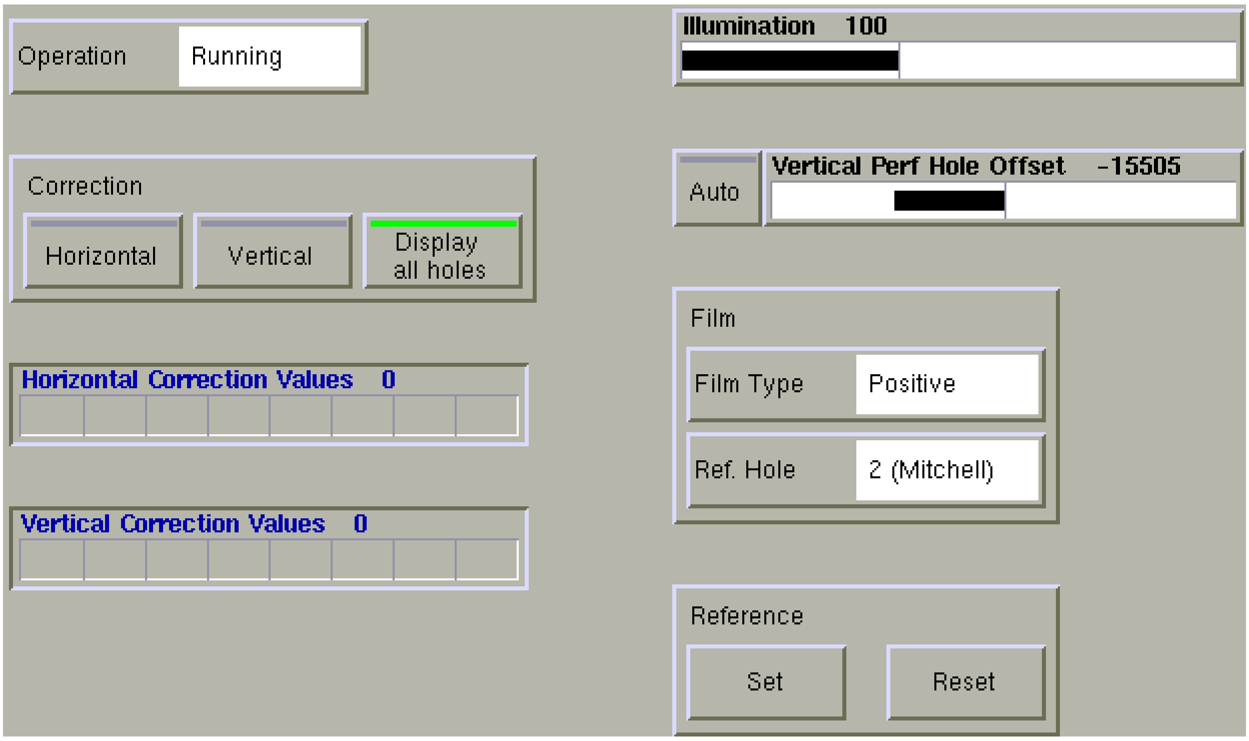
5.23.5 EDITOR OUT COUPLING

Biphase signals are generated internally by dividing down pulses coming from the sprocket wheel.
Here the Biphase signal is used to synchronize external editor units (e.g. Pogle).
It can be switched between 2x Biphase (48/50Hz), 10x Biphase (240/250Hz) and 1x Biphase (24/25Hz), referring to the EDITOR OUT connector of Rack 2.
To find out the correct setting, check manual of connected device.
To modify, click on the key and select from the drop down menu.
The current setting is shown on the key display.

5.24 MAIN MENU “SPECIAL” / SUBMENU “STEADYSCAN”

This menu contains ...

... in preparation!


Operation: Running

Illumination 100

Vertical Perf Hole Offset -15505

Horizontal Correction Values 0

Vertical Correction Values 0

Film Type: Positive

Ref. Hole: 2 (Mitchell)

Fig. 51: Main menu **“Special”** / submenu **“SteadyScan”**

see 5.24.1

see 5.24.2

see 5.24.3

see 5.24.4

see 5.24.5

see 5.24.6

5.24.1

5.24.2

5.24.3

5.24.4

5.24.5

5.24.6

5.25 MAIN MENU “MEMO” / SUBMENU “TK MEMS”

Tk Mems are permanent storages for Tk settings.
Each user can store up to 128 Tk Mems.
The currently selected Tk Mem is shown with an orange frame.
The frame can be moved to another Tk Mem with the designated digipot.

Tk Mems are recalled by directly touching the Mem on the screen, either the number (1 to 128) or the name. The last Mem recalled is indicated by a green bar above the number. With the **Undo / Redo** button the user can toggle between the recalled Mem and the previous Tk settings.

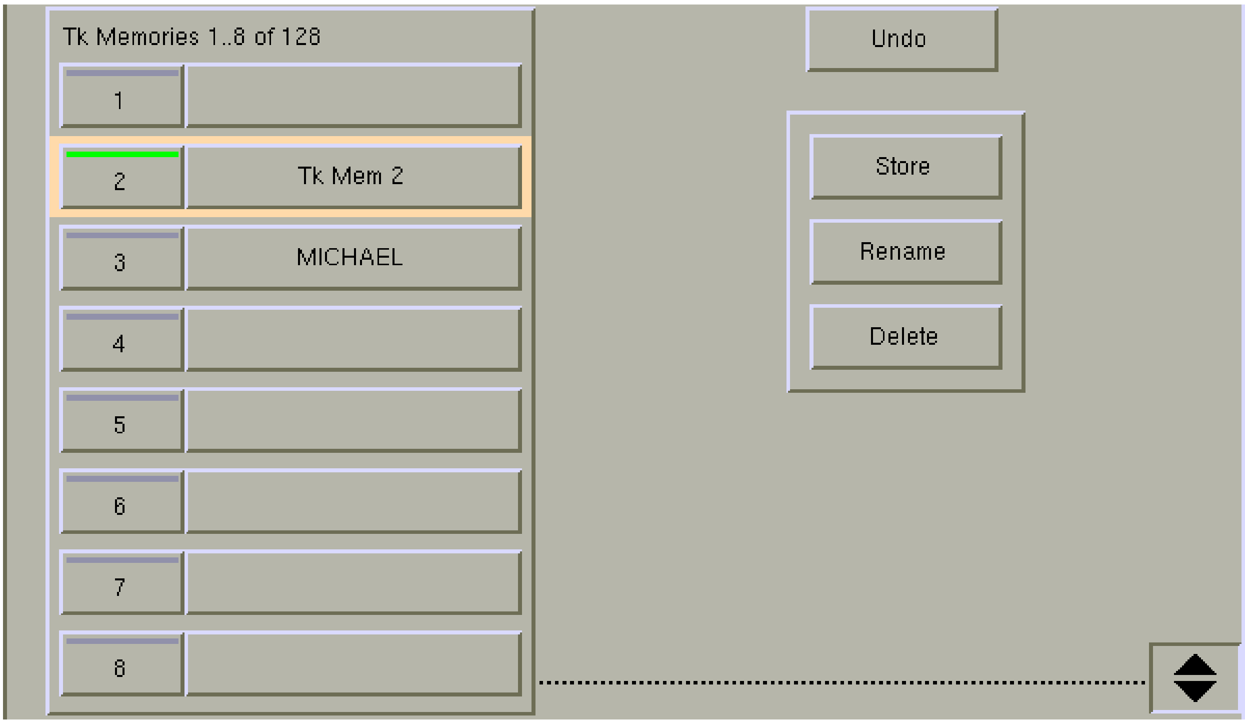


Fig. 52: Main menu **“Memo”** / submenu **“TK Mems”**

Undo / Redo	**see 5.25.1**
Store	**see 5.25.2**
Rename	**see 5.25.3**
Delete	**see 5.25.4**

5.25.1 UNDO / REDO

With the **Undo / Redo** button the user can toggle between the recalled Mem and the previous Tk settings.

5.25.2 STORE

Tk Mems are stored with the **Store** button. A dialog appears where the user can change the default name of the Tk Mem. The Tk Mem is stored after pressing the Ok button.

5.25.3 RENAME

Tk Mems are renamed with the **Rename** button. A dialog appears where the user can change the name of the Tk Mem.

5.25.4 DELETE

Tk Mems are deleted with the **Delete** button.

NOTE **Tk mems are only applicable to**

Spirit with software V 4.36 or higher,
Shadow with software V 2.37 or higher and
Specter with software V 3.1 or higher.

Static parameters can not be recalled with Tk Mems. This includes e.g. Framing, SAS Speed, Image Size (data transfer), Color Limiter, all settings in the dialog Sharp | Expert, SDTV Ratio, Genlock Settings and all setup and config parameters.

5.26 MAIN MENU “MEMO” / SUBMENU “CUE”

This menu provides you with Cue, Loop and Freeze functions.

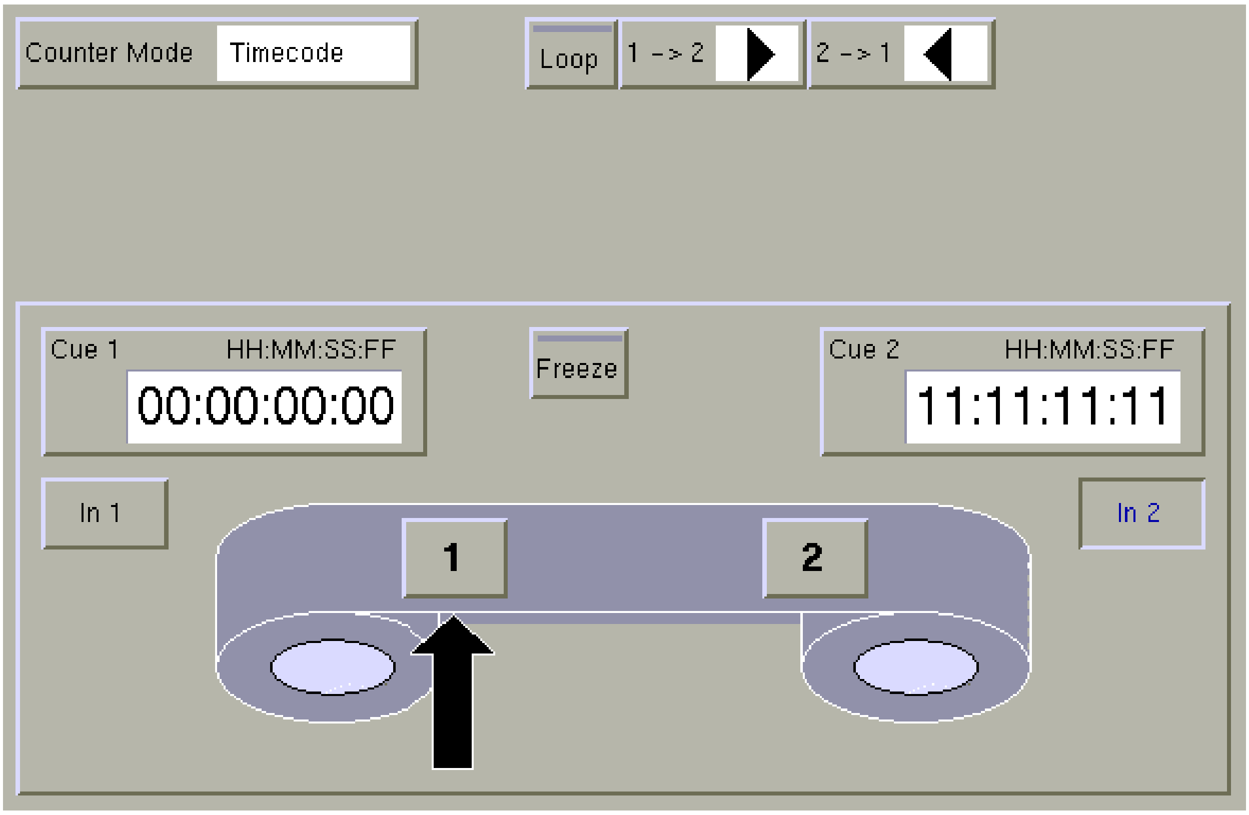


Fig. 53: Main menu **“Memo”** / submenu **“Cue”**

Counter Mode Window	**see 5.26.1**
Loop Mode Window	**see 5.26.2**
Cue, Loop, Freeze Input Window	**see 5.26.3**

5.26.1 COUNTER MODE WINDOW

Here you can switch the counter between Timecode, Feet+Frames and Film Frames.

5.26.2 LOOP MODE WINDOW

The Loop button is a switch to enable or disable the Loop function.
The adjacent buttons are to select Play or Shuttle mode to move the film between the loop start and end points.

5.26.3 CUE, LOOP, FREEZE INPUT WINDOW

Cue moves your material directly to a preselected position.

There are different ways of programming a Cue point. Move the material to the desired position and hit IN 1. The corresponding counter position will be entered and displayed above.
Instead of physically playing the material you can also just type it in. Therefore click on the counter display and a numeric keyline will appear on top of the page. Type in the Cue timecode and confirm by pressing the OK button.

Hitting the function KEY 1 or 2 cues your material to the programmed position. This is done with shuttle or play depending on the current position of your film material. Between the cue points 1 and 2, the selected mode applies. From outside or by hitting a function key twice, always Shuttle mode is performed.

The **Loop** function allows you to repeatedly have a look at the same part of the material (e.g. for color matching purposes). The material is moved from a programmed start to a programmed stop point and back again.

There are different ways of programming a loop.
Move the material to the desired start/end points and press IN 1/IN 2. When pressing IN 1 or IN 2, the corresponding counter position will be entered and displayed above.
Instead of physically playing the film, you can also program start/end points by typing them in. Therefore click on the counter display and a numeric keyline will appear on top of the page. Type in the desired values and confirm by pressing the OK button.
Adjacent to the LOOP button, Play or Shuttle mode can be selected.

Once you left the loop by mistake just hit LOOP to shuttle your material back between the loop–points.

Hitting the LOOP button will perform your programmed loop until you hit LOOP again.

Freeze mode suppresses every frame between the programmed freeze and defreeze points.
As long as your programmed freeze lasts, the last frame prior the freeze start will be shown.

Freeze and defreeze can be programmed as described under Loop mode. Once entered, notice that the bar on the filmroll display will be highlighted in yellow.

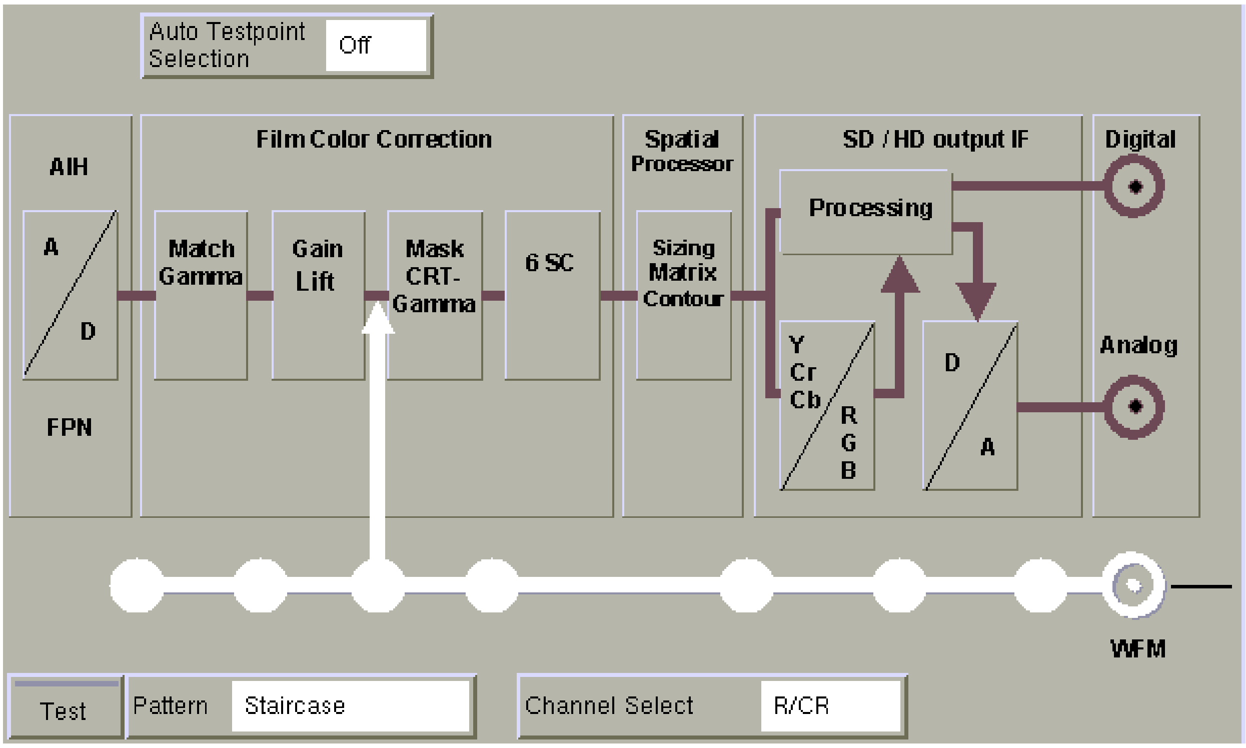
Hitting the FREEZE button will execute this function if you play your material in Forward mode starting from somewhere before the freeze in-point.

Note that this function is not available in Play Reverse mode.

Note: FREEZE and LOOP functions are not applicable at the same time.

5.27 MAIN MENU “MONITORING” / SUBMENU “TEST POINT”

This menu contains Test Point and Test Pattern selection.



Auto Testpoint Selection: Off

Pattern: Staircase

Channel Select: R/CR

Fig. 54: Main menu **“Monitoring”** / submenu **“Test Point”**

Test Point Selection Scheme	**see 5.27.1**
Auto Test Point Selection	**see 5.27.2**
Test Patterns	**see 5.27.3**
Channel Selection	**see 5.27.4**

5.27.1 TEST POINT SELECTION SCHEME

This scheme roughly shows the path of signal processing in the DataCine/Telecine. Click on the white points below or inside the scheme to switch the Test Point to the desired position. The signal you are looking at on a waveform monitor corresponds to what a video signal would look like measured at that point. This is an emulation, such signals do not exist in reality as there is only data processed inside the machine.
Therefore this function cannot really be used in terms of troubleshooting but is an essential tool for color matching.
A rough guideline where to look at:
Test Point 1: Illumination Adjustment
Test Point 2: Negative Matching
Test Point 6: RGB Output

5.27.2 AUTO TEST POINT SELECTION

This new function is very helpful for the colorist (especially if there are not enough waveform monitors on–hand to cover all important Test Points at the same time). It automatically swaps over the Test Point selection according to the control the colorist currently uses.
The function can be switched On and Off.

5.27.3 TEST PATTERNS

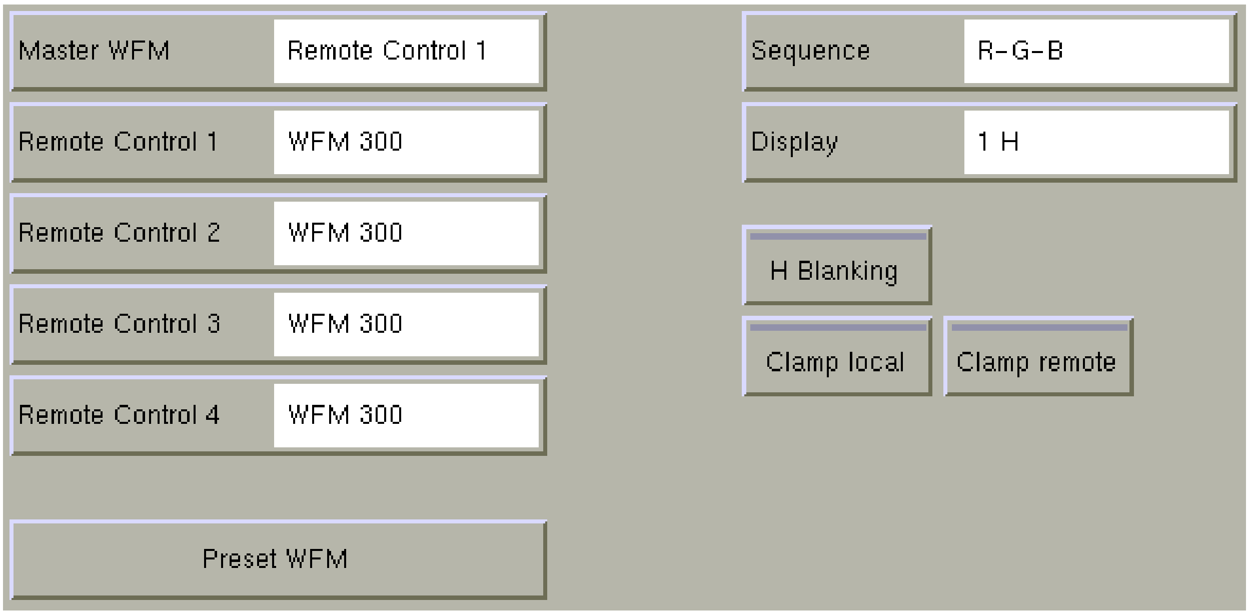
When Test is enabled, the yellow bar on the key is lit. By pressing the adjacent PATTERN KEY, a drop-down menu opens containing all available Test Patterns.
To select a pattern, click on it.
The current selection is shown on the key display. If it reads ”HDNR Pattern”, a SCREAM Test Pattern is active.
This function is redundant in the Color/Setup and the Home/Setup Menu.

5.27.4 CHANNEL SELECTION

To switch separate signals/channels in the measuring path of a connected oscilloscope or vectorscope. Click on the key and make your choice from the drop-down menu.
The following selection can be made: R/C_R, G/Y, B/C_B, SUPER, PARADE and VECTOR.
SUPER stands for ”Superimposed”, RGB signals are displayed one upon the other.
Operation PARADE mode displays the signals side by side (sequentially).
VECTOR stands for switching over the oscilloscope to vector display mode (only available for coded signals, YC_RC_B operation).

5.28 MAIN MENU “MONITORING” / SUBMENU “SETUP”

This menu gives an overview of the waveform monitor settings.



Master WFM	Remote Control 1
Remote Control 1	WFM 300
Remote Control 2	WFM 300
Remote Control 3	WFM 300
Remote Control 4	WFM 300
Sequence	R-G-B
Display	1 H

Fig. 55: Main menu **“Monitoring”** / submenu **“Setup”**

Remote Control Keys	**see 5.28.1**
Preset WFM	**see 5.28.2**
Sequence	**see 5.28.3**
Display	**see 5.28.4**
H Blanking	**see 5.28.5**
Clamp Local	**see 5.28.6**
Clamp Remote	**see 5.28.7**

5.28.1 REMOTE CONTROL KEYS

There are 4 waveform monitor interfaces on the back of Rack 2.
With the upper key you can declare one of these 4 interfaces MASTER.
The 4 keys below serve to assign a certain waveform monitor to the respective REMOTE CONTROL interface.
The following waveform monitors are selectable:
WFM 300, WFM 300A, PT 5464, 1730HD, 1735HD (Tektronix), PM 5664 (Philips).
Click on the key and select from the drop-down menu (according to your connected device).

5.28.2 PRESET WFM

Click on this key to open the waveform monitor preset window.
Here you can enter and store the preset settings for your different waveform monitors.
Click on the SELECTION key to chose the (REMOTE CONTROL) interface from the drop-down menu. The type of monitor connected is automatically displayed in the window below.
Now you can choose one of four function buttons to select the display mode of the WFM. When active, the green bar on the button is lit.
At the same time a popup appears in the window below telling you to enter correspondent settings on the local panel of the WFM. Then click the STORE button.
To exit the window, click the DONE button.

Note that certain functions cannot be selected with certain waveform monitors.

5.28.3 SEQUENCE

Defines the sequence of the displayed RGB signals.
Click on the key to select one of the possible settings: RGB or GBR.
The standard setting is RGB and normally there is no reason to change it.

5.28.4 DISPLAY

One or two horizontal periods of the frame can be displayed.
Click on the key to select one of the possible settings.

5.28.5 H BLANKING

Switches the horizontal blanking of the monitoring signals on or off.
Click on the key to select one of the possible settings.

5.28.6 CLAMP LOCAL

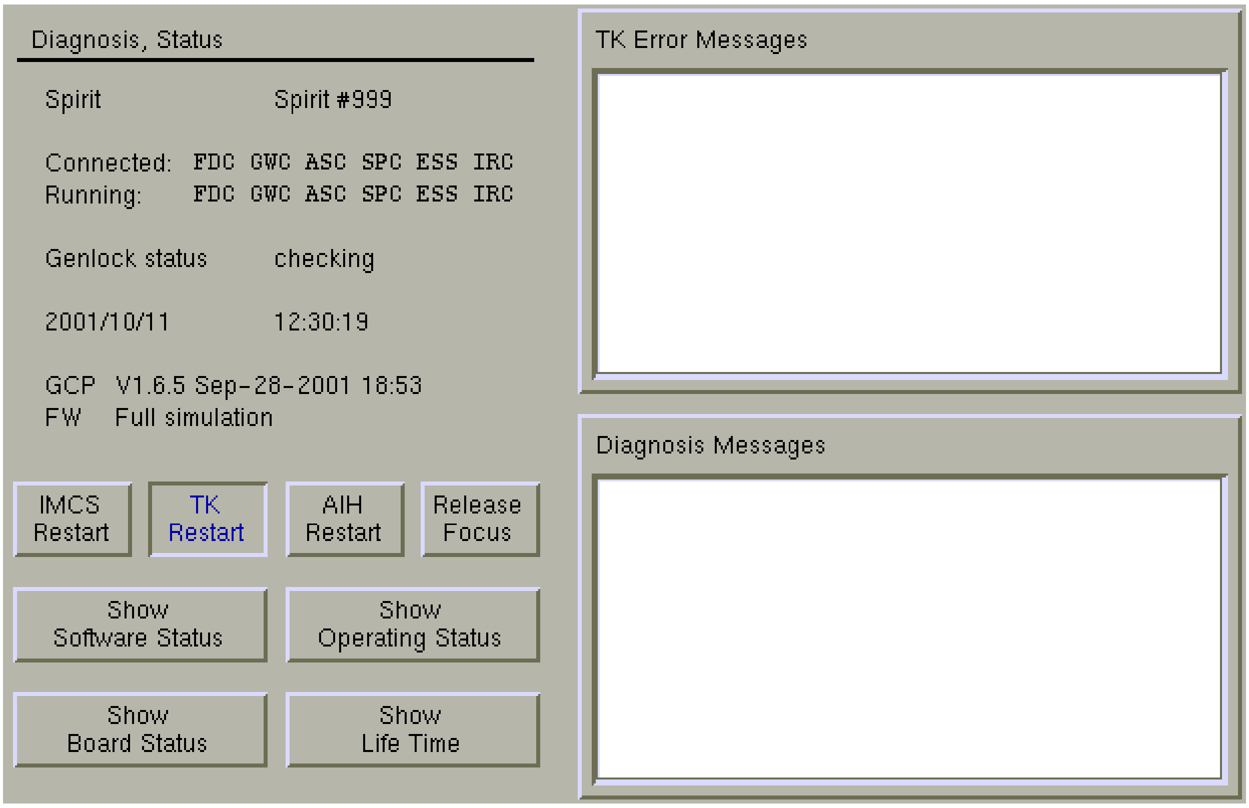
Switches the clamping of the monitoring signals ANALOG OUT RGB (back of Rack 2) on or off.
Click on the key to select one of the possible settings.

5.28.7 CLAMP REMOTE

Switches the clamping of the monitoring signals REM ANALOG OUT RGB (back of Rack 2) on or off.
Click on the key to select one of the possible settings.

5.29 MAIN MENU “MONITORING” / SUBMENU “DIAGNOSIS”

This menu contains system information and displays error or maintenance relevant messages.



Diagnosis, Status

Spirit Spirit #999

Connected: FDC GWC ASC SPC ESS IRC
Running: FDC GWC ASC SPC ESS IRC

Genlock status checking

2001/10/11 12:30:19

GCP V1.6.5 Sep-28-2001 18:53
FW Full simulation

Fig. 56: Main menu **“Monitoring”** / submenu **“Diagnosis”**

Diagnosis/Status Window	**see 5.29.1**
Reset Function Keys	**see 5.29.2**
Operating Status	**see 5.29.3**
Software Status	**see 5.29.4**
Life Time	**see 5.29.5**
Board Status	**see 5.29.6**
TK Error Messages Window	**see 5.29.7**
Diagnosis Messages Window	**see 5.29.8**

5.29.1 DIAGNOSIS / STATUS WINDOW

This window contains various system information such as:

DataCine/Telecine serial number, the connected machine control units and their status, genlock status;

date, time and the software and firmware versions of this panel (GCP).

5.29.2 RESET FUNCTION KEYS

The **Spirit** DataCine is provided with 4 reset buttons:

IMCS RESTART:	restarts the IMCS communication between the GCP and the DataCine.
TK RESTART:	performs a software restart of all machine control units of the DataCine.
AIH RESTART:	performs a software restart of the Analog Imaging Head (the scanner unit of the Spirit DataCine).
RELEASE FOCUS:	gets the AIH scanner block in the upmost position. This is an emergency recovery function. E.g. in case there was a filter in the focus path, the focus initialization process is disturbed and the AIH is blocked on his way down (without having reached the downmost position, AIH is not able to move up again).

The **Shadow** Telecine is only provided with 2 reset buttons:

AIH RESTART and FOCUS RELEASE are not available.

5.29.3 OPERATING STATUS

Click on this key to open the operating status window.
The operating status of certain parts of the DataCine/Telecine is displayed.

Example:

AIH STATUS:	running
ILLUMINATION STATUS:	shutter closed
GENLOCK STATUS:	internal sync ok
FPN STATUS:	off
WETGATE STATUS:	no wetgate

To exit the window, press the PREV button left to the touchscreen.

5.29.4 SOFTWARE STATUS

Click on this key to open the software status window.
Here you can check the software versions of the machine control units (processors).
Version numbers, date, protocol and control status information are displayed.

E.g.:   FDC: V. 4.28 May–7–2001 14:10   5   Running

To exit the window, press the PREV button left to the touchscreen.

5.29.5 LIFE TIME

Click on this key to open the software status window.
Here you can check the operation hours (”Life Time”) of certain parts in your DataCine/Telecine and you can see after how many hours (Life Cycle”) they should be replaced.

The following units figure:
DataCine/Telecine (in total), Projection lamp, Capstan lamp, Audio 16 lamp (optional), Audio 35 lamp (optional).

In case a unit is replaced, the LIFE TIME display can be reset by pressing the corresponding RESET button.

To exit the window, press the PREV button left to the touchscreen.

5.29.6 BOARD STATUS

Click on this key to open the board status window.
Here you can check which boards are mounted in Rack 1, Rack 2 and Rack 3 of your DataCine/Telecine.

If existing, they figure with slot number, identification letters and number, software and firmware versions.

To exit the window, press the PREV button left to the touchscreen.

5.29.7 TK ERROR MESSAGES WINDOW

Error messages sent from the DataCine/Telecine are displayed in this window.

Example for a typical message:
”Standard error from FDC 2001.5.17.../remote select rejected, door is open”.

It is possible to scroll through the messages by dialing the adjacent digipot.

To delete all error messages, hold down the UNITY button and click to the Error Messages Window.

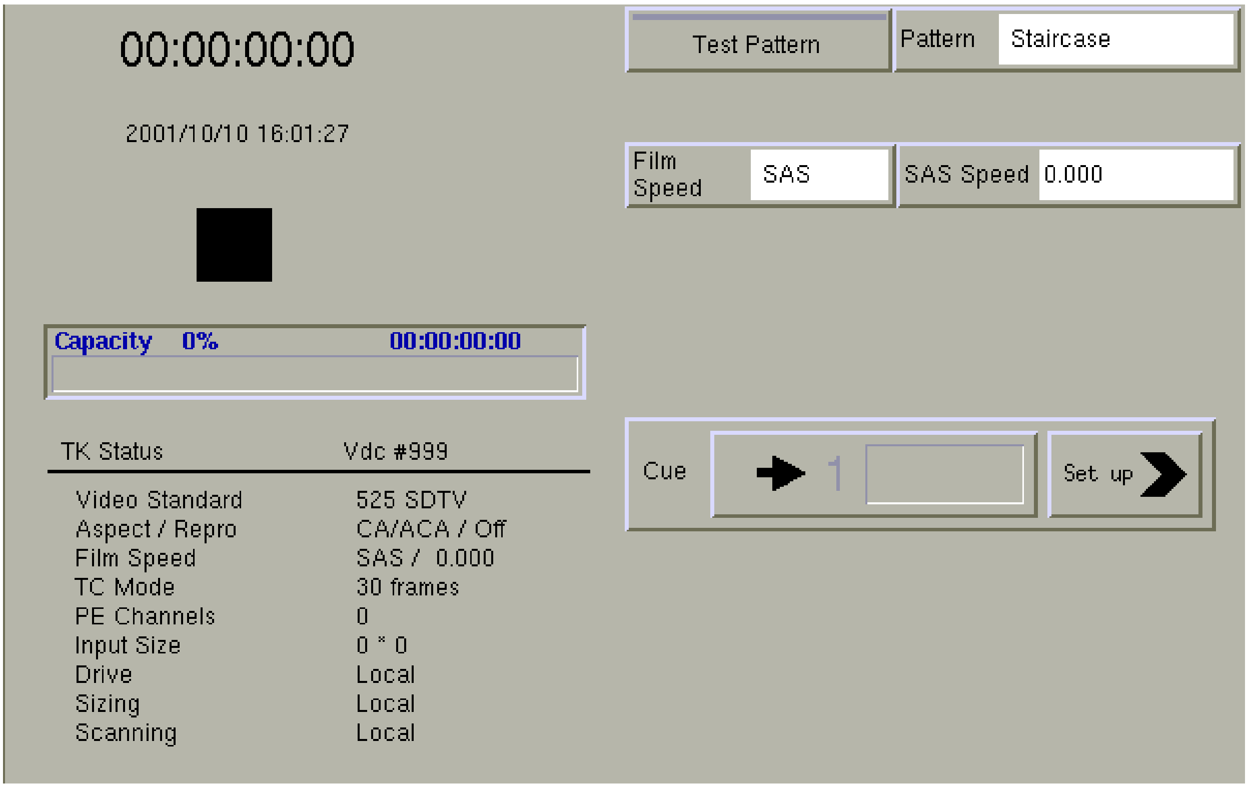
5.29.8 DIAGNOSIS MESSAGES WINDOW

Error messages from the GCP panel itself, e.g. provoked by wrong handling, are displayed in this window.

Not yet implemented.

5.30 MAIN MENU “HOME” / SUBMENU “OVERVIEW” (SPECTER ONLY)

This menu is for general set-up of the Specter Virtual DataCine.



00:00:00:00

2001/10/10 16:01:27

Capacity 0% 00:00:00:00

Pattern Staircase

Film Speed SAS

SAS Speed 0.000

TK Status	Vdc #999
Video Standard	525 SDTV
Aspect / Repro	CA/ACA / Off
Film Speed	SAS / 0.000
TC Mode	30 frames
PE Channels	0
Input Size	0 * 0
Drive	Local
Sizing	Local
Scanning	Local

Fig. 57: Main menu **“Home”** / submenu **“Overview” (Specter only)**

Time Code Status Window	**see 5.30.1**
Film Deck Status Window	**see 5.30.2**
TK Status Window	**see 5.30.3**
Test Pattern	**see 5.30.4**
Film Speed	**see 5.30.5**
(Cue) TC Set up	**see 5.30.6**
Capacity Display	**see 5.30.7**

5.30.1 TIME CODE STATUS WINDOW

It shows the current time code of the telecine and the current system date and time.
Time code can be changed in TK Config/Timecode menu.
Date and time can be set in Home/Setup menu.

5.30.2 FILM DECK STATUS WINDOW

The actual telecine status is shown by symbols. Filmdeck functions are only available via hard key on the right bottom side.

5.30.3 TK STATUS WINDOW

It shows the type and number of the device connected and the major device settings. Those can be changed on the respective pages (e.g. video standard).

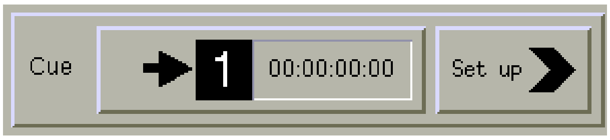
5.30.4 TEST PATTERN

When Test is enabled, the yellow bar on the key is lit. By pressing the adjacent PATTERN KEY, a drop–down menu opens containing all available Test Patterns.
To select a pattern, click on it.
The current selection is shown on the key display.
If it reads ”HDNR Pattern”, a Scream Test Pattern is active.
This function is redundant in the Monitoring and in the Color/Setup Menu.

5.30.5 FILM SPEED

Film speed (frames per second) can be chosen as fixed speed or variable speed. Clicking the FILM SPEED button opens a drop down menu offering 6 fixed film speeds (depending on the respective standard) and SAS (Select A Speed). In case a variable speed is required, press SAS. Now the adjacent SAS SPEED button is active.
Variable film speed (SAS SPEED) can be altered in two ways either with the digipot control or by typing it in. Touching the area activates a numeric keyline on top of the screen.
After typing in the desired speed, confirm by hitting OK on the bottom of the dialog.
The current SAS speed is visible on the key display.

5.30.6 CUE / CUE TIMECODE, SET UP



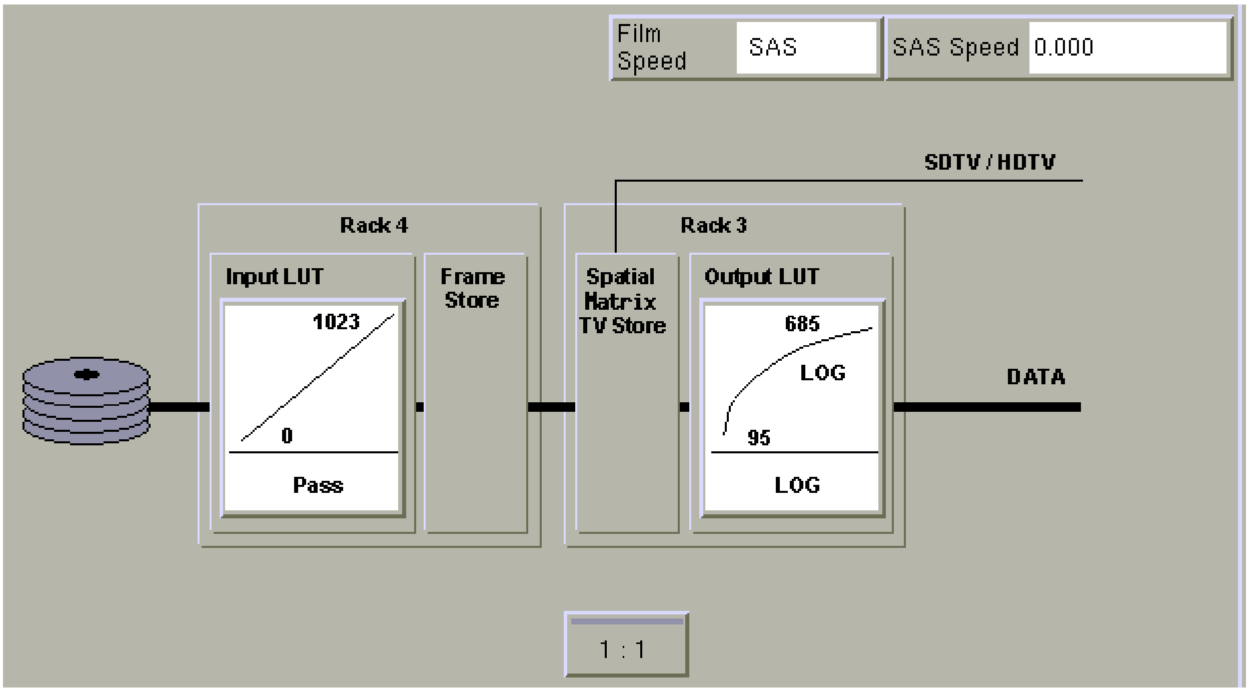
Press the Cue button to cue the Telecine to the defined timecode visible in the button display.
If no cue point is defined or if the Set up button is pressed, the main menu “Memo” submenu “Cue” for set up of the cue points is opened, as described in section 5.26.

5.30.7 CAPACITY DISPLAY

This display shows the amount of loaded material and the current position.

5.31 MAIN MENU “VDC CONFIG” / SUBMENU “MAPPING” (SPECTER ONLY)

This menu contains Speed and Data conversion settings of the Specter Virtual DataCine.



Film Speed SAS

SAS Speed 0.000

Fig. 58: Main menu **“VDC Config”** / submenu **“Mapping” (Specter only)**

Film Speed	**see 5.31.1**
Input LUT	**see 5.31.2**
Output Lut	**see 5.31.3**
1 : 1	**see 5.31.4**

5.31.1 FILM SPEED

Film speed (frames per second) can be chosen as fixed speed or variable speed. Clicking the FILM SPEED button opens a drop down menu offering 6 fixed film speeds (depending on the respective standard) and SAS (Select A Speed). In case a variable speed is required, press SAS. Now the adjacent SAS SPEED button is active.
Variable film speed (SAS SPEED) can be altered in two ways either with the digipot control or by typing it in. Touching the area activates a numeric keyline on top of the screen.
After typing in the desired speed, confirm by hitting OK on the bottom of the dialog. The current SAS speed is visible on the key display.

5.31.2 INPUT LUT

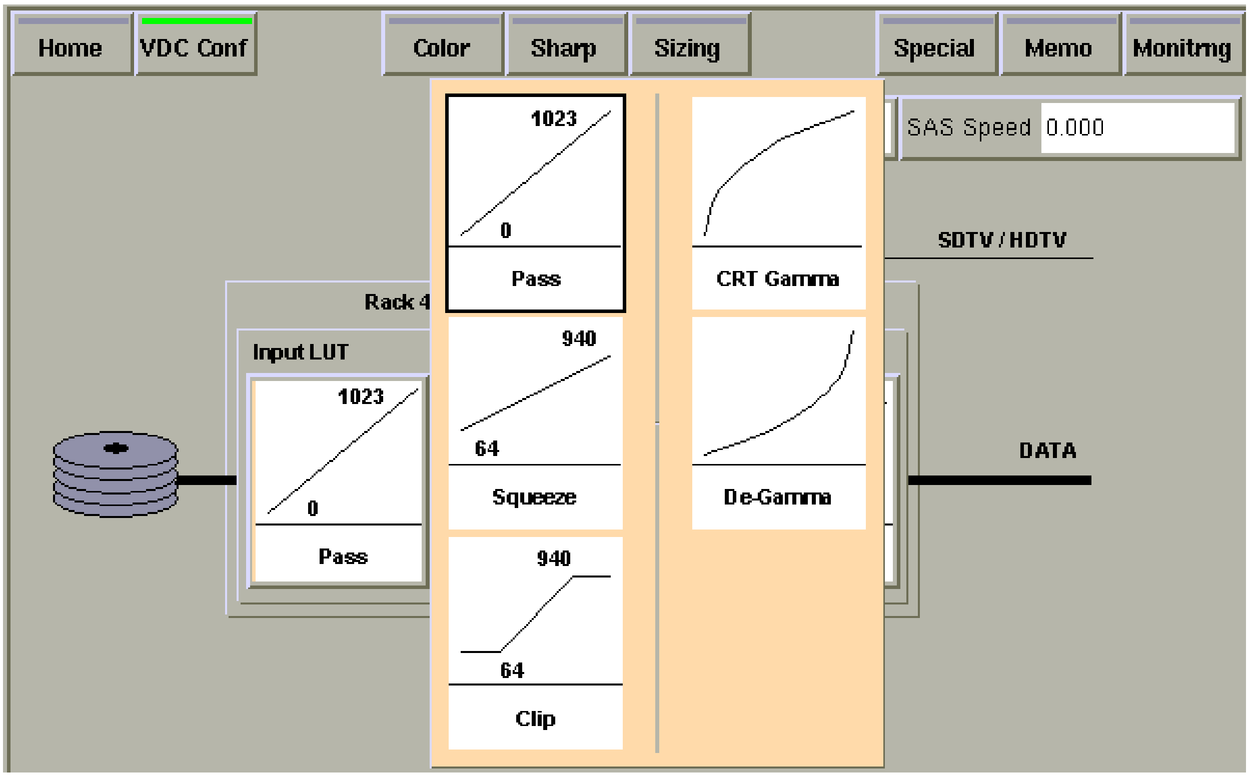


Fig. 59: **Input LUTs** (main menu **“VDC Config”** / submenu **“Mapping”**)

This function maps the incoming images to a level range according to the selected LUT (Look Up Table).

Depending on the particular application, a certain LUT has to be choosen.

Five fixed LUTs are selectable:
Pass, Squeeze, Clip, CTR Gamma, and De-Gamma.

5.31.3 OUTPUT LUT

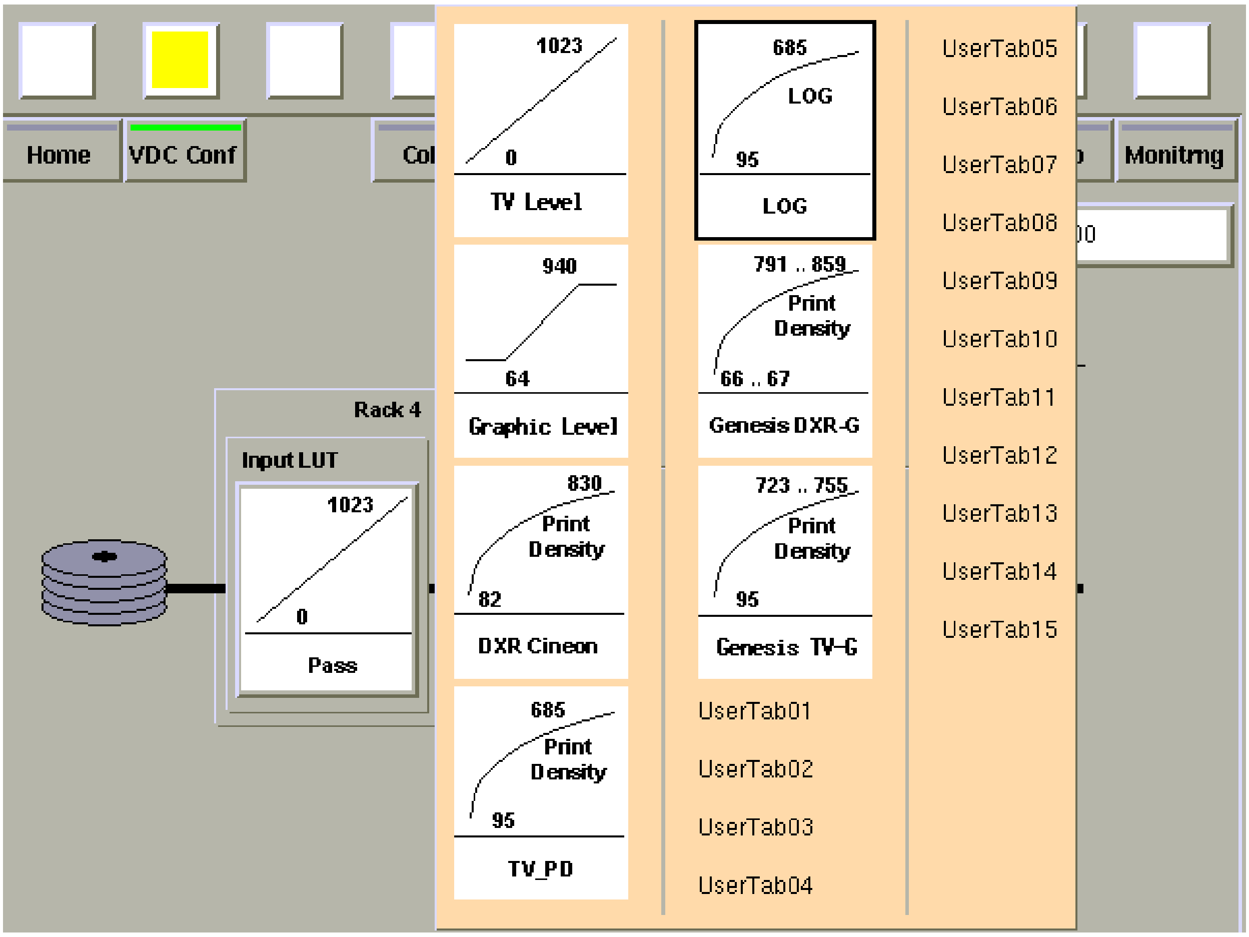


Fig. 60: **Output LUTs** (main menu **“VDC Config”** / submenu **“Mapping”**)

This function maps the image output data to level ranges according to the selected LUT (Look Up Table).

Depending on the particular application, a certain LUT has to be chosen.

Seven fixed LUTs and fifteen user defined LUTs are selectable.

The fixed LUTs split up into two main groups:

Standard	TVLEV, GRLEV, DXR, TV_PD and LOG
Genesis	DXR–G, TV–G (Kodak scanner emulation)

NOTE

For more details, see documentation:
Data Transfer for Post Production
(Applications Management – Film Imaging Products)

web:
www.imagingsystems.de

5.31.4 1 :1

This function prevents the Specter Virtual DataCine from modifying the image geometry.
All adjustments of the menu Sizing / Sizing are bypassed when **1 : 1** mode is switched on.

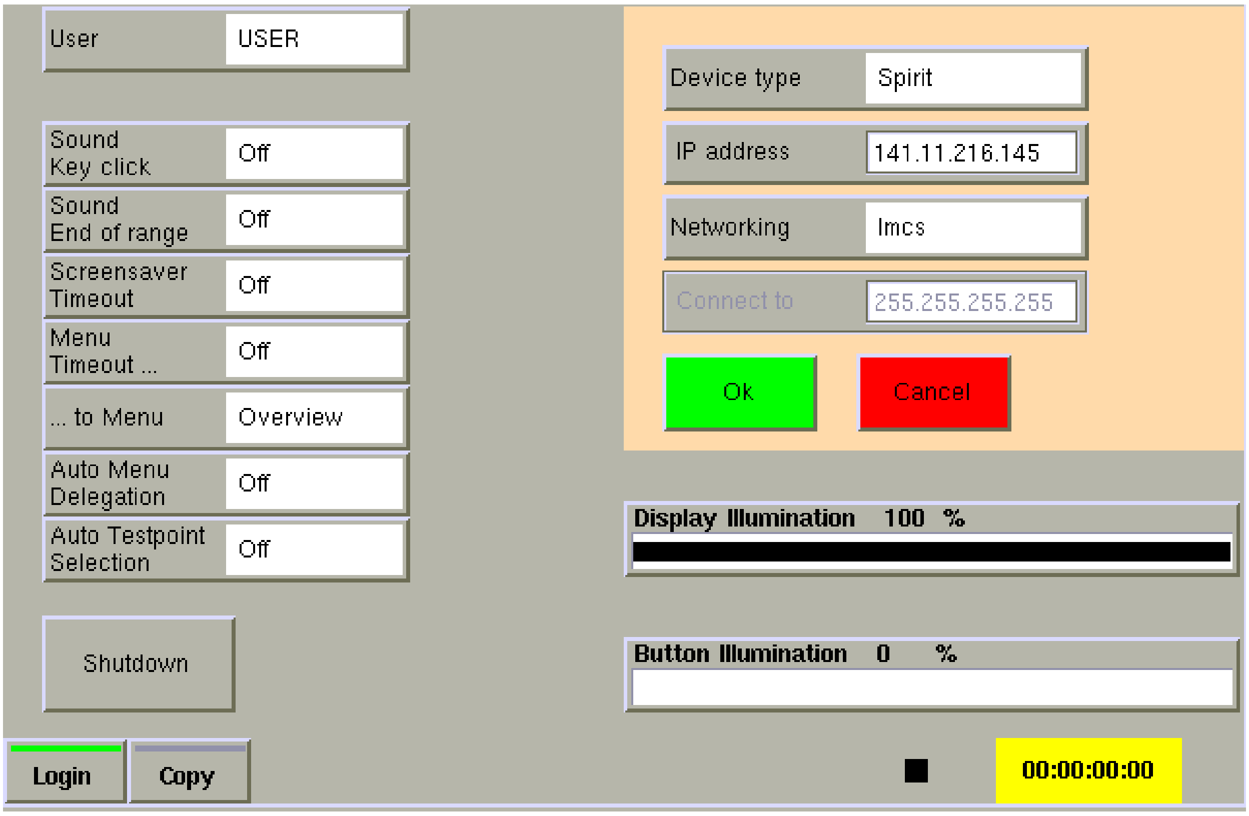
NOTE: To set the output image size to the input image size select **Equal to Input** in the dialog VDC Config / Data / Image Size.

ATTENTION! 1 : 1 mode means not that no other creative modifications, for example Color or Contour adjustments can be made.

5.32 LOGIN MENU - GCP NETWORK SETUP

Pressing once the **Power On/Off** button during operation opens the **Login** menu. User settings can be modified.

The GCP network setup is shown in the opened **Panel setup** window.
The **Panel setup** window can only be opened by authorized personnel after entering the password.



User	USER
Sound Key click	Off
Sound End of range	Off
Screensaver Timeout	Off
Menu Timeout ...	Off
... to Menu	Overview
Auto Menu Delegation	Off
Auto Testpoint Selection	Off
Device type	Spirit
IP address	141.11.216.145
Networking	lmcs
Connect to	255.255.255.255

Display Illumination 100 %

Button Illumination 0 %

Fig. 61: **"Login"** menu with opened **"Panel setup"** window

Device type	**see 5.32.1**
IP address	**see 5.32.2**
Networking	**see 5.32.3**
Connect to	**see 5.32.4**
Configuration	**see 5.32.5**

5.32.1 DEVICE TYPE

This window shows the type of the telecine and is self-adjusting, i.e. it automatically changes when connecting to a different telecine.

5.32.2 IP ADDRESS

This window shows the GCP network address for the TCP/IP network protocol. The address has to be unique, i.e. every GCP has to have its own address. The user should only change the lower byte of the IP address, i.e. possible addresses are 192.168.0.0 to 192.168.0.255.

5.32.3 NETWORKING

This window shows the network protocols supported. Default is Imcs for controlling the telecine.

5.32.4 CONNECT TO

This window shows the network address of other GCPs to connect to.
Default is 255.255.255.255.

5.32.5 CONFIGURATION

5.32.5.1 Default Configuration

Device type: Spirit
IP address: 192.168.0.103
Networking: Imcs
Connect to: 255.255.255.255

With a different network setup it is possible to configure a master-GCP controlling the telecine with one or more slave-GCPs communicating with the master-GCP.

5.32.5.2 Master-GCP Configuration Example

Device type: Spirit
IP address: 192.168.0.103
Networking: Imcs & Udp
Connect to: 255.255.255.255

5.32.5.3 Slave-GCP Configuration Example

Device type: Spirit
IP address: 192.168.0.104
Networking: Udp
Connect to: 192.168.0.103

NOTE **After changing the network setup, the GCP has to be restarted!**

5.33 COPY DIALOG

Pressing twice the **Power On/Off** button during operation opens the **Copy** dialog.

The **Copy** dialog is used to copy **User Settings, Help Files, Error Messages** and **Operating Software**. That means, the data is saved on an external store.

The data can also be reloaded from the external store or copied to a different directory on the external or local store/disk.

For the external store, a so-called USB Memory Key (**DiskonKey**) is used. For more information, see section 5.33.1 “Connecting the USB Memory Key (DiskonKey) to the GCP1”.

The Copy dialog contains two option menus (**Device 1** and **Device 2**). Each can be delegated either to the GCP HardDisk or to the DiskonKey. The directory tree of the chosen disk is shown in the adequate display of Device 1 and 2.

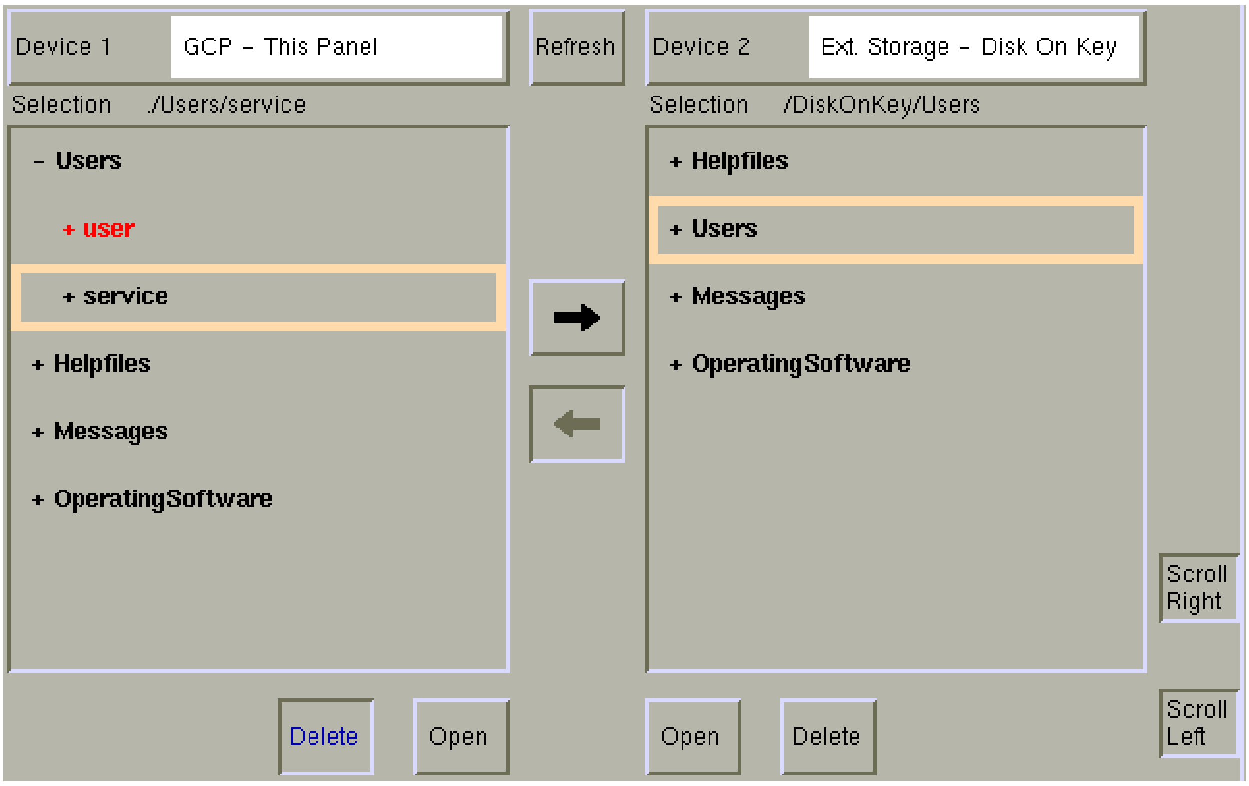


Fig. 62: **“Copy”** dialog

The directory **Users** contains one sub-directory for each user configured, titled with the name of the respective user.
These **User** directories contain user settings like **Panel Settings, MaskingMems** or **TkMems**.

The directory **Helpfiles** contains the **HTML files**, that are used for representation of the Help Dialogs.

Error Messages, that are displayed in the **Diagnosis Dialog**, are contained in adequate text files in the directory **Messages**.

The directory **OperatingSoftware** contains the supported versions of GCP Software.

Entries of **Device 1** can be selected with the Digipot **Scroll Left**;
entries of **Device 2** can be selected with the Digipot **Scroll Right**.
This can also be executed by clicking the entry directly.

With the **Open/Close** button the selected directory can be opened and closed alternately. This can also be done by clicking on the selected directory repeatedly.

Copying data is made in two steps. First, source directory and target directory have to be chosen, then the direction (arrow) button has to be clicked for the desired copy direction.

So it is possible to copy data (for example, the Panel Settings) from one user into the directory of another user, on the same disk.

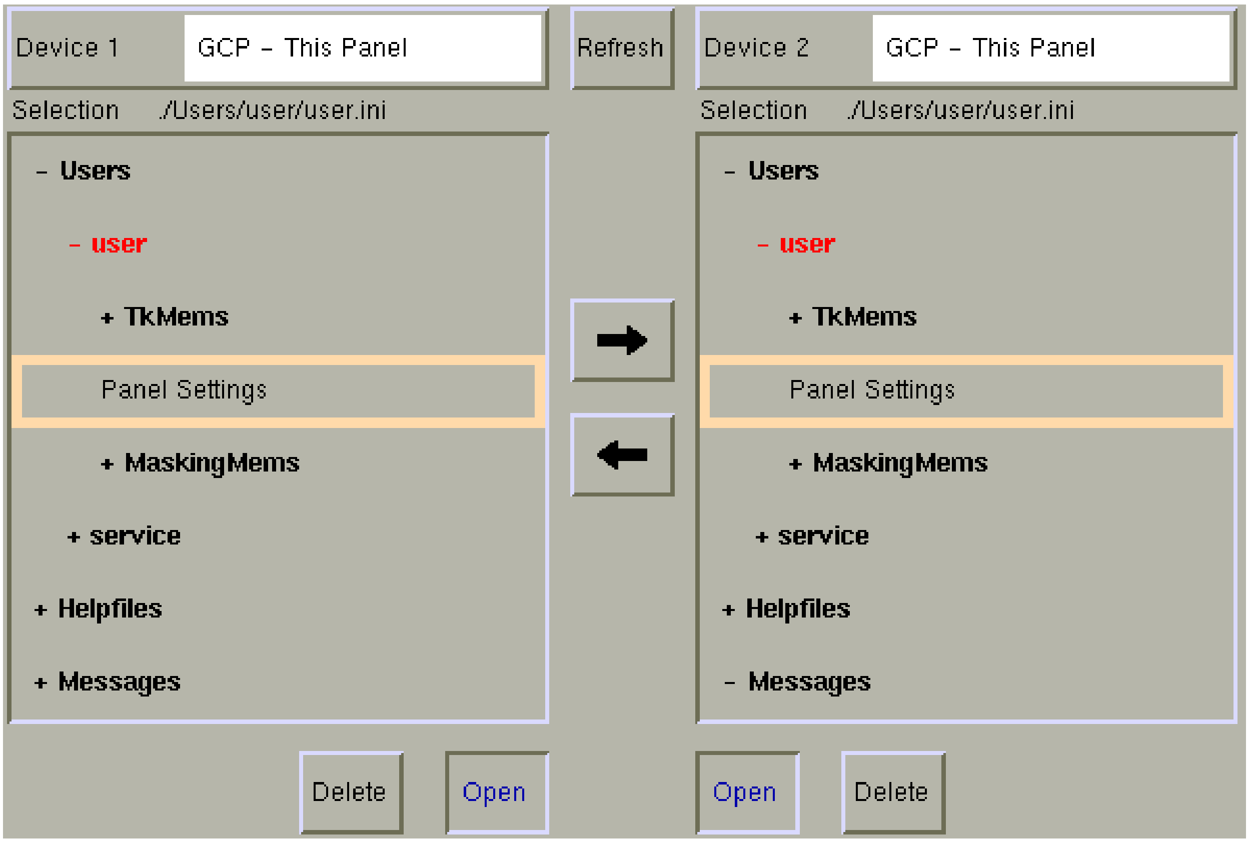


Fig. 63: **"Copy"** dialog

The **Delete** button serves to delete data.

ATTENTION: **It is not possible to delete the data of the logged-in GCP user.**
It is not recommended (and only allowed to the user SERVICE) to delete the directories Users, Helpfiles or OperatingSoftware to avoid unintended effects.

The **Refresh** button is used to reload the directory tree from both selected disks (Device 1 and Device 2) into the dialog displays.

5.33.1 CONNECTING THE USB MEMORY KEY (DiskonKey™) TO THE GCP1

The IBM Memory Key - DiskonKey™ - based on USB is offering you a removable drive for storing and reading data with a capacity of 8 MB.

It has to be connected to the **USB DOWNSTREAM-PORT (J4)** at the rear side of the GCP panel (USB connectors are hot pluggable without the need of power off).

An USB extension cable can be used (max. lengths approx. 3 m / 120 inch).

The delivered USB extension cable has a lengths of 1.8 m / 71 inch
(order number 5 136 391 005).

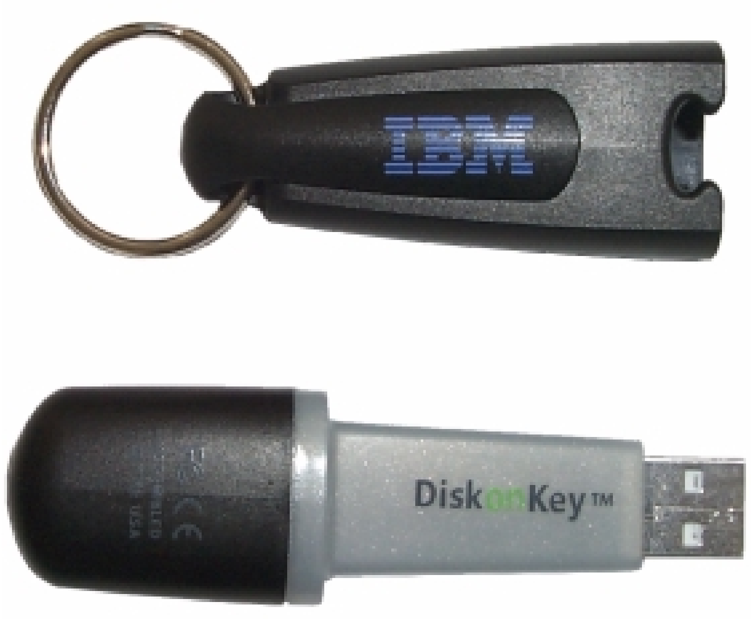


Fig. 64: Memory Key - DiskonKey™

NOTE

USB memory key support works only with IBM™ 8MB USB Memory Key
Part Number: 19K4513.
Other USB devices are not tested and not supported by Thomson multimedia!

The Memory Key can be obtained from the market or ordered from
THOMSON mulimedia Weiterstadt
under the order number 3 114 060 017.

6. BLOCK DIAGRAM GCP1